Subject Index

Abatement and removal
Adsorption of As(V) from Water Using Nanomagnetite, 656
Contribution of the Estrogen-Degrading Bacterium *Novosphingobium* sp. Strain JEM-1 to Estrogen Removal in Wastewater Treatment, 711
Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713
Evaluation of Electric Arc Furnace Slag as a Potential Phosphate-Removal Substrate, 649
Modeling the Removal of Arsenic by Iron Oxide Coated Sand, 636
New Approach: Waste Materials as Sorbents for Arsenic Removal from Water, 753
Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989
Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174
Simultaneous Organic and Nutrient Removal in a Naturally Ventilated Biotower Treating Presettled Municipal Wastewater, 644
Sorption of Cr (VI) onto Olive Stone in a Packed Bed Column: Prediction of Kinetic Parameters and Breakthrough Curves, 766
Treatment of Arsenic-Laden Water Plant Sludge by Anaerobic Digestion, 2108

Absorption
Chromium (III) Immobilization and Its Influence on C_3S Hydration, 2124
Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages, 1371
Kinetics of SO_2 Absorption with Fly Ash Slurry with Concomitant Production of a Useful Wastewater Coagulant, 645
Optimal Tuning of Amplitude Proportional Coulomb Friction Damper for Maximum Cable Damping, 1618
Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212
Time-Domain Hydrodynamic Forces on Rigid Dams with Reservoir Bottom Absorption of Energy, 585

Accident prevention
Differences in Off-Road Glances: Effects on Young Drivers' Performance, 1831

Accidents
Analysis of Residential Framing Accidents, Activities, and Task Demands, 341
Case-Based Reasoning Approach to Construction Safety Hazard Identification: Adaptation and Utilization, 331
Construction Safety in Kuwait, 1502
Impacts of Stressors and Stress on the Injury Incidents of Construction Workers in Hong Kong, 423
SCIA: GIS-Based Software for Assessing the Impacts from Chemical Industrial Accidents, 2106
Sleep Deprivation and Its Consequences in Construction Workers, 422

Accreditation
Project Management Application for Engineering Program Accreditation Preparation, 1586

Accuracy
Accuracy of Kinematic Wave and Diffusion Wave Approximations for Flood Routing. I: Steady Analysis, 7
Clarifying the Relationship between Quality of Global Positioning System Data and Precision of Positioning, 1771
Explicit Pseudodynamic Algorithm with Improved Stability Properties, 519
Improving HSPF Modeling Accuracy from FTABLES: Case Study for the Illinois River Basin, 1119
Propagation of an Unmodeled Additive Constant in Range Sensor Observations, 1779
Record Length Requirements for Annual Maximum Flood Series, 1126
Rigorous Estimation of Local Accuracies, 1780

Acidic water
Feasibility of Using Coal Fly Ash for Mine Waste Containment, 690

Acids
Catalytic Decomposition of CFC-12 over Solid Super Acid Mo_2O_7/ZrO_2, 770
Diverting Electron Fluxes to Hydrogen in Mixed Anaerobic Communities Fed with Glucose and Unsaturated C18 Long Chain Fatty Acids, 677
Performance of a PRB for the Remediation of Acidic Groundwater in Acid Sulfate Soil Terrain, 862

Acoustic techniques
Aquatic Habitat Bottom Classification Using ADCP, 978
Assessment of Construction Joint Effect in Full-Scale Concrete Beams by Acoustic Emission Activity, 547
Comparative Study of Acoustic Emission and Scanning Electron Microscope to Evaluate Fracture Process Zone in Concrete Beams, 1473
Embedded Cement-Based Piezoelectric Sensors for Acoustic Emission Detection in Concrete, 1494
Estimation of Power Spectra of Acoustic-Doppler Velocimetry Data Contaminated with Intermittent Spikes, 982
Monitoring Suspended Sediment Dynamics Using MBES, 945
Subcritical Contraction for Improved Open-Channel Flow Measurement Accuracy with an Upward-Looking ADVM, 1269

Activated carbon
Adsorption of RDX and its Nitroso Metabolites onto Activated Carbon, 2104
Modeling the Temperature Dependence of Adsorption Equilibriums of VOC(s) onto Activated Carbons, 620
Modeling TOC Breakthrough in Granular Activated Carbon Adsorbers, 631

Activated sludge

Application of Two-Directional Time Series Models to Replace Missing Data, 661

Contribution of the Estrogen-Degrading Bacterium *Novosphingobium* sp. Strain JEM-1 to Estrogen Removal in Wastewater Treatment, 711

Evidence and Long-Term Feasibility of Enhanced Biological Phosphorus Removal in Oxidation-Ditch Type of Aerated-Anoxic Activated Sludge Systems, 748

In Situ Microscale Analyses of Activated Sludge Flocs in the Enhanced Biological Phosphate Removal Process by the Use of Microelectrodes and Fluorescent In Situ Hybridization, 676

Modeling VOC Emissions in the High-Purity Oxygen Activated Sludge Process, 743

SSPRSD Using a Filamentous Fungal Strain *Penicillium expansum BS30* Isolated from Wastewater Sludge, 694

Active control

Hybrid Control Charts for Active Control and Monitoring of Concrete Strength, 1348

Adaptive systems

Adaptive Climate Response Cost Models for Infrastructure, 1181

Toll Plaza Merging Traffic Control for Throughput Maximization, 1796

Tracking Error-Based Servohydraulic Actuator Adaptive Compensation for Real-Time Hybrid Simulation, 1651

Adhesives

Glued Composite Timber-Concrete Beams. I: Interlayer Connection Specimen Tests, 1729

Glued Composite Timber-Concrete Beams. II: Analysis and Tests of Beam Specimens, 1730

Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256

Thermoviscoelastic Analysis and Creep Testing of Ambient Temperature Cure Epoxies Used in Adhesive Anchor Applications, 1460

Adsorption

Adsorption Mechanism of Arsenate on Crystal γ-Fe_2O_3 Nanoparticles, 712

Adsorption of As(V) from Water Using Nanomagnetite, 656

Adsorption of RDX and its Nitroso Metabolites onto Activated Carbon, 2104

Adsorptive Removal of Parts per Million Level Selenate Using Iron-Coated GAC Adsorbents, 731

Application of Natural Clayey Soil as Adsorbent for the Removal of Copper from Wastewater, 769

Biosorptive Color Removal: Applicability of Equilibrium Isotherm Models, 2098

Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668

Competitive Sorption of Pesticides onto Treated Wood Charcoal and the Effect of Organic and Inorganic Parameters on Adsorption Capacity, 732

Disposal of Arsenic-Laden Adsorptive Media: Economic Analysis for California, 730

Evaluation of Electric Arc Furnace Slag as a Potential Phosphate-Removal Substrate, 649

Granular Activated Carbon Adsorption of 2-Methylisoborneol (MIB): Pilot- and Laboratory-Scale Evaluations, 718

Groundwater Classification Using Multivariate Statistical Methods: Birimian Basin, Ghana, 765

Modeling Arsenite Adsorption on Rusting Metallic Iron, 657

Modeling the Temperature Dependence of Adsorption Equilibriums of VOC(s) onto Activated Carbons, 620

Modeling TOC Breakthrough in Granular Activated Carbon Adsorbers, 631

Natural Organic Matter Removal by Adsorption onto Carbonaceous Nanoparticles and Coagulation, 729

Removal of Metal Ions from Storm-Water Runoff by Low-Cost Sorbents: Batch and Column Studies, 734

Removal of Selected Toxic Metals by a Modified Adsorbent, 2109

Aeration

Benthal Solids Properties Influencing ASB Design and Operating Practices, 633

Chute Aerators. I: Air Transport Characteristics, 980

Chute Aerators. II: Hydraulic Design, 981

Modeling VOC Emissions in the High-Purity Oxygen Activated Sludge Process, 743

Self-Aeration and Friction over Rock Chutes in Uniform Flow Conditions, 1044

Aerodynamics

Aerodynamic Damping in the Along-Wind Response of Tall Buildings, 1617

Aerodynamic Effects Caused by Trains Entering Tunnels, 1879

Analysis of Wind-Induced Clip Loads on Standing Seam Metal Roofs, 1641

Effects of a Construction Tower Crane on the Wind Loading of a High-Rise Building, 1749

Estimation of Probabilistic Extreme Wind Load Effects: Combination of Aerodynamic and Wind Climate Data, 532

Flutter of a Swept Aircraft Wing with a Powered Engine, 65

Horizontal Wind Loads on Open-Frame, Low-Rise Buildings, 1615

Low-Dimensional Proper Orthogonal Decomposition Modeling as a Fast Approach of Aerodynamic Data Estimation, 43

Planform and Flexibility on Lift Characteristics for Flow over Low-Aspect Ratio Wings, 44

Stability Characteristics for Transport Aircraft Response to Clear-Air Turbulence, 61

Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531

Tornado-Induced Wind Loads on a Low-Rise Building, 1616

Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681

Aeroelasticity

Structural Uncertainty Effect on Classical Wing Flutter Characteristics, 74

Aerospace engineering

Accelerometer-Based Force Balance for High Enthalpy Facilities, 68

Alternating Direction Implicit Method-Based Nonlinear Filtering for Relative Orbit Estimation, 60

Autopilot Supported by Nonlinear Model Following Reconfigurable Flight Control System, 75

Ballistic Walking Design via Impulsive Control, 54

Dynamic Model of an Astronaut Equipped with a Manned Maneuvering Unit in Virtual Reality, 55

Earth and Space 2010, 2236

Femtotechnology: Design of the Strongest AB Matter for Aerospace, 69

Railgun Space Launcher, 70

Relative Circular Navigation Guidance for Three-Dimensional Impact Angle Control Problem, 71

Robust Control of PVTOL Aircraft with a Nonlinear Optimal Control Solution, 67

Africa

Groundwater Classification Using Multivariate Statistical Methods: Birimian Basin, Ghana, 765

Improved Method to Calculate a Water Poverty Index at Local Scale, 754

Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138

Opportunities for Efficient and Environmentally Friendly Energy Systems: BMC Case Study in Lobatse, Botswana, 453

Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry, 1582

Age factors

Older Drivers' Perception and Acceptance of In-Vehicle Devices for Traffic Safety and Traffic Efficiency, 1838

Aggregates

Comprehensive Evaluation of AIMS Texture, Angularity, and Dimension Measurements, 1381

Determination of the Main Parameters of Alkali Silica Reaction Using System Identification Method, 1441

Discrete Element Analysis of the Influences of Aggregate Properties and Internal Structure on Fracture in Asphalt Mixtures, 1341

Dynamic Properties of Lightweight Concrete Beams Made by Sedimentary Lightweight Aggregate, 1408

Effects of Coarse Aggregate Coatings on Concrete Performance, 1350

Effecus of Water-Binder Ratio and Fine Aggregate–Total Aggregate Ratio on the Properties of Hwangtoh-Based Alkali-Activated Concrete, 1443

Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials, 1407

Fresh and Hardened Properties of SCC Made with Different Aggregate and Mineral Admixtures, 1458

HSC with Expanded Perlite Aggregate at Wet and Dry Curing Conditions, 1486

Improved Method to Calculate a Water Poverty Index at Local Scale, 754

Investigating the Alkali-Silica Reaction of Recycled Glass Aggregates in Concrete Materials, 1480

Investigating the Effects of Curing Methods on the Compressive Strength of Bitublock, 1362

Investigation of the Use of Lightweight Aggregate Hot-Mixed Asphalt in Flexible Pavements in Frost Susceptible Areas, 1358

Load Transfer Characteristics of Aggregate Interlocking in Concrete Pavement, 1810

Multiscale Curvature Analysis of Asphaltic Aggregate Particles, 308

Optimizing Rolling Patterns for Chip Seals Using Laboratory Aggregate Loss Performance Tests on Field Fabricated Samples, 1520

Optimum Percentage of Fly Ash Reinforcement in Vinyl Ester Composites, 1351

Performance of a Stabilized Aggregate Base Subject to Different Durability Procedures, 1397

Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410

Recycled Red-Clay Ceramic Construction and Demolition Waste for Mortars Production, 1366

Shear Characteristics and Design for High-Strength Self-Consolidating Concrete, 1705

Stone-on-Stone Contact of Permeable Friction Course Mixtures, 1470

Study on Strain-Rate Sensitivity of Cementitious Composites, 566

Triaxial Frequency Sweep Characterization of Asphalt-Aggregate Adhesion in Saskatchewan Asphaltic Mixes, 1806

Use of High Fineness of Fly Ash to Improve Properties of Recycled Aggregate Concrete, 1404

Use of Lightweight ECS as a Fill Material to Control Approach Embankment Settlements, 1409

Using Recycled Concrete Aggregates in New Zealand Ready-Mix Concrete Production, 1390

Aging

Aging Considerations in the Development of Time-Dependent Seismic Fragility Curves, 1753

Comparative Study of Rheological Behavior of Modified Binders for High-Temperature Areas, 1452

Effect of Various Organomodified Montmorillonites on the Properties of Montmorillonite/Bitumen Nanocomposites, 1430

Effects of Aging on the Mechanical Characteristics of Bituminous Binders in PAC, 1429

Effects of Thickness on the Aging of HDPE Geomembranes, 803

Impact of Polypropylene Application Method on Long-Term Aging of Polypropylene-Modified HMA, 1456

Investigating the Effects of Curing Methods on the Compressive Strength of Bitublock, 1362

Laboratory Study on Ultraviolet Radiation Aging of Bitumen, 1427

Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213

Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212

Wet Lay-Up Manufactured FRPs for Concrete and Masonry Repair: Influence of Water on the Properties of Composites and on Their Epoxy Components, 257

Agriculture

Comparison of Ordinary Kriging, Regression Kriging, and Cokriging Techniques to Estimate Soil Salinity Using LANDSAT Images, 1240

Distribution and Trends in Reference Evapotranspiration in the North China Plain, 1226

Factors Affecting Participation in Spot and Options Markets for Water, 2004

Farmers' Adaptation and Regional Land-Use Changes in Irrigation Systems under Fluctuating Water Supply, South India, 1267

Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221

Knowledge-Based Model for Supplementary Irrigation Assessment in Agricultural Watersheds, 1242

Modeling Conjunctive Use Operations and Farm Decisions with Two-Stage Stochastic Quadratic Programming, 1998

Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224

Performance of Nitrogen-Removing Bioretention Systems for Control of Agricultural Runoff, 733

Relative Comparison of the Local Recalibration of the Temperature-Based Evapotranspiration Equation for the Korea Peninsula, 1266

Air flow

Accelerometer-Based Force Balance for High Enthalpy Facilities, 68

Aerodynamic Effects Caused by Trains Entering Tunnels, 1879

Modeling Evapotranspiration Effects on Air Flowing in a Small Glass Roofed Tunnel, 1236

Multiple Linear Regression Model Approach for Aerosol Dispersion in Ventilated Spaces Using Computational Fluid Dynamics and Dimensional Analysis, 685

Stability Characteristics for Transport Aircraft Response to Clear-Air Turbulence, 61

Air pollution

Contribution of Traffic-Generated Nonexhaust PAHs, Elemental Carbon, and Organic Carbon Emission to Air and Urban Runoff Pollution, 774

Diesel Particulate Matter Number Emissions: Evaluation of Existing Modal Emission Modeling Approaches, 1799

Electron Beam Irradiation for Mercury Oxidation and Mercury Emissions Control, 675

Field Procedures for Real-World Measurements of Emissions from Diesel Construction Vehicles, 1186

Air transportation

Evolution and Development of Multiairport Systems: Worldwide Perspective, 1898

Aircraft

Autopilot Supported by Nonlinear Model Following Reconfigurable Flight Control System, 75

Feasibility Study of Rotorcraft Fire Fighting for High-Rise Buildings, 58

Flight Mechanics Analysis of a Motorized Trike with Composite Wing, 66

Flutter Control of Smart Composite Structures in Hygrothermal Environment, 73

Flutter of a Swept Aircraft Wing with a Powered Engine, 65

Identification and Monitoring of Modal Parameters in Aircraft Structures Using the Natural Excitation Technique (NExT) Combined with the Eigensystem Realization Algorithm (ERA), 49

Planform and Flexibility on Lift Characteristics for Flow over Low-Aspect Ratio Wings, 44

Robust Control of PVTOL Aircraft with a Nonlinear Optimal Control Solution, 67

Temperature Effects on Material Behavior of Aerospace Aluminum Alloys for Subsonic and Supersonic Aircraft, 53

Thermal Scale Modeling by FEM and Test, 41

Airport and airfield runways

Design and Performance of a 46-m-High MSE Wall, 851

Evaluation of the Use of Reclaimed Asphalt Pavement in Airfield HMA Pavements, 1809

Forecasting Cybercar Use for Airport Ground Access: Case Study at Baltimore Washington International Airport, 1938

Mesh-Independent Fracture Modeling for Overlay Pavement System under Heavy Aircraft Gear Loadings, 1828

Stress-Prediction Model for Airport Pavements with Jointed Concrete Slabs, 1859

Airports and airfields

Drilling Under DFW, 2193

Evolution and Development of Multiairport Systems: Worldwide Perspective, 1898

Investigation of Laboratory Procedure for Evaluating Chemical Dust Palliative Performance, 1472

Seismic Sophistication, 2191

Alabama

Determinants of Industry Acceptance for Highway Warranty Contracts: Alabama Case Study, 1172

Alaska

Adaptive Climate Response Cost Models for Infrastructure, 1181

Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198

Impulse Product Parameter in Landslide Generated Impulse Waves, 2043

Reliability Assessment for Operational Wave Forecasting System in Prince William Sound, Alaska, 2060

Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704

Algorithms

Accounting for Greenhouse Gas Emissions in Multiobjective Genetic Algorithm Optimization of Water Distribution Systems, 1974

Algorithm to Generate a Discrete Element Specimen with Predefined Properties, 20

Application of Exponential-Based Methods in Integrating the Constitutive Equations with Multicomponent Nonlinear Kinematic Hardening, 606

Application of Innovative Critical Chain Method for Project Planning and Control under Resource Constraints and Uncertainty, 419

Applying Multiobjective Genetic Algorithm to Analyze the Conflict among Different Water Use Sectors during Drought Period, 2013

Bridge Model Updating Using Response Surface Method and Genetic Algorithm, 147

Calibration and Optimization of the Pumping and Disinfection of a Real Water Supply System, 2008

Collection and Analysis of Critical Infrastructure Interdependency Relationships, 311

Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm, 330

Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm

Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988

Comparison of Using Mixed-Integer Programming and Genetic Algorithms for Construction Site Facility Layout Planning, 425

Considering Actual Pipe Connections in Water Distribution Network Analysis, 1035

Critical Analysis of Different Hilbert-Huang Algorithms for Pavement Profile Evaluation, 309

Design of a Single-Pool Downstream Controller Using Quantitative Feedback Control Theory, 1275

Design of Pumped Water Distribution Networks with Storage, 1971

Empirical Modeling Methodologies for Construction, 318

Experimental Analysis of Hydraulic Solver Convergence with Genetic Algorithms, 977

Explicit Pseudodynamic Algorithm with Improved Stability Properties, 519

Extreme Impact Contamination Events Sampling for Water Distribution Systems Security, 1966

Force Finding of Tensegrity Systems Using Simulated Annealing Algorithm, 1709

Genetic Algorithm for Bus Frequency Optimization, 1849

Global Navigation Satellite System Ambiguity Resolution with Constraints from Normal Equations, 1774

Image-Based Machine Learning for Reduction of User Fatigue in an Interactive Model Calibration System, 283

Interbasin Water Transfer: Economic Water Quality-Based Model, 1209

Irrigation Scheduling with Genetic Algorithms, 1277

Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames, 1655

Large-Scale Nonlinear Conjunctive Use Optimization Problem: Decomposition Algorithm, 1964

Linear Algebra and Minimum Relative Entropy to Investigate Contamination Events in Drinking Water Systems, 2007

Linearly Implicit Time Integration Methods for Real-Time Dynamic Substructure Testing, 596

Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida, 1976

L_1-Norm Path Flow Estimator for Handling Traffic Count Inconsistencies: Formulation and Solution Algorithm, 1848

Long-Range Facility Planning Based on Dynamic Programming for Optimum Combined Cost and Probability Paths, 1562

Modeling Strength of High-Performance Concrete Using an Improved Grammatical Evolution Combined with Macrogenetic Algorithm, 287

Monitoring Design for Source Identification in Water Distribution Systems, 2024

Multimodal Feeder Network Design Problem: Ant Colony Optimization Approach, 1824

Multiobjective Groundwater Remediation System Design Using Coupled Finite-Element Model and Nondominated Sorting Genetic Algorithm II, 1091

Multiobjective Optimization of Operational Responses for Contaminant Flushing in Water Distribution Networks, 1963

Multiobjective Water Quality Model Calibration Using a Hybrid Genetic Algorithm and Neural Network–Based Approach, 724

New Layer-Moduli Back-Calculation Method Based on the Constrained Extended Kalman Filter, 1790

Novel Multiobjective Shuffled Frog Leaping Algorithm with Application to Reservoir Flood Control Operation, 1981

Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114

Optimal Design of Sensor Placement in Water Distribution Networks, 1959

Optimal Layout of Gill Cells for Very Large Floating Structures, 1697

Optimal Meter Placement for Water Distribution System State Estimation, 1993

Optimal Water Distribution Network Design with Honey-Bee Mating Optimization, 273

Optimization of Watershed Control Strategies for Reservoir Eutrophication Management, 1291

Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316

Optimizing Capacity-Expansion Planning of Groundwater Supply System between Cost and Subsidence, 1118

Origin-Based Partial Linearization Method for the Stochastic User Equilibrium Traffic Assignment Problem, 1794

Performance Investigation of Nakagami-m Distribution to Derive Flood Hydrograph by Genetic Algorithm Optimization Approach, 1121

Precedence-Preserving GAs Operators for Scheduling Problems with Activities' Start Times Encoding, 293

Preliminary Cost Estimation Model Using Case-Based Reasoning and Genetic Algorithms, 307

Pressure-Dependent Leak Detection Model and Its Application to a District Water System, 1970

Real-Time Optimal Valve Operation and Booster Disinfection for Water Quality in Water Distribution Systems, 2005

Reliability-Constrained Optimization of Water Treatment Plant Design Using Genetic Algorithm, 647

Scheduling Renewal of Water Pipes While Considering Adjacency of Infrastructure Works and Economies of Scale, 2011

Scheduling Resource-Constrained Projects with Ant Colony Optimization Artificial Agents, 266

SLOTS: Effective Algorithm for Sensor Placement in Water Distribution Systems, 2022

Stability Analysis of Direct Integration Algorithms Applied to MDOF Nonlinear Structural Dynamics, 508

Stability Characteristics for Transport Aircraft Response to Clear-Air Turbulence, 61

State of the Art for Genetic Algorithms and Beyond in Water Resources Planning and Management, 2001

Variational Technique for Spacecraft Trajectory Planning, 56

Weighted Residual Numerical Differentiation Algorithm Applied to Experimental Bending Moment Data, 857

Alignment

Development of Railway Track Geometry Indexes Based on Statistical Distribution of Geometry Data, 1862

Allowable stress design

Relationship between Probability of Breakage to Maximum Principal Stresses in Window Glass, 78

Aluminum

Aluminum Reactions and Problems in Municipal Solid Waste Landfills, 2126

Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746

Local Buckling of Fire-Exposed Aluminum Members: New Design Model, 1612

Nearest Neighbor Probabilistic Model for Aluminum Polycrystals, 538

Temperature Effects on Material Behavior of Aerospace Aluminum Alloys for Subsonic and Supersonic Aircraft, 53

Ammonia

Explanation for Anomalous Readings during Monitoring of a Best Management Practice, 1258

Anaerobic treatment

Anaerobic Biodegradation of Polyhydroxybutyrate in Municipal Sewage Sludge, 693

Biological and Abiotic Color Reduction of Paper Mill Effluents during Anaerobic Composting, 692

Diverting Electron Fluxes to Hydrogen in Mixed Anaerobic Communities Fed with Glucose and Unsaturated C18 Long Chain Fatty Acids, 677

Experimental Validation of the Static Granular Bed Reactor for Industrial Waste Anaerobic Treatment, 737

Textile Dye Removal in Single-Phase and Two-Phase Anaerobic Biotreatment Systems, 2125

Treatment of Arsenic-Laden Water Plant Sludge by Anaerobic Digestion, 2108

Understanding the Mixing Pattern in an Anaerobic Expanded Granular Sludge Bed Reactor: Effect of Liquid Recirculation, 678

Analysis

Computer Vision-Based Video Interpretation Model for Automated Productivity Analysis of Construction Operations, 284

Analytical techniques

Analytical and Numerical Models of Postbuckling of Orthotropic Symmetric Plates, 589

Analytical Approach for Detection of Multiple Cracks in a Beam, 493

Analytical Model for Fiber-Reinforced Granular Soils under High Confining Stresses, 1448

Analytical Model for FRP Confinement of Concrete Columns with and without Internal Steel Reinforcement, 245

Analytical Solution for Two-Dimensional Solute Transport in Finite Aquifer with Time-Dependent Source Concentration, 590

Analytical Solutions for Contaminant Diffusion in Double-Layered Porous Media, 923

Application of the Analytical Strip Method to Antisymmetric Laminates, 588

Closed-Form Expression of the Response Time of an Open Channel, 1274

FRP Confinement of Tuff and Clay Brick Columns: Experimental Study and Assessment of Analytical Models, 235

General Model to Represent Multiple Wetland and Lake Stage-Storage Behavior, 1134

Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221

Handling the Temperature Effect in Vibration Monitoring: Two Subspace-Based Analytical Approaches, 495

Hygrothermoelastic Postbuckling Response of Laminated Composite Plates, 39

Improved Baseline Productivity Analysis Technique, 351

Improved Baseline Productivity Analysis Technique

Investigation on the Impact of Seasonally Frozen Soil on Seismic Response of Bridge Columns, 139

Methodology for Conducting Discrete-Event Simulation Studies in Construction Engineering and Management, 315

Risk Evaluation for Maxi Horizontal Directional Drilling Crossing Projects, 1572

Simple Three-Step Analytical Scheme for Prediction of Elastic Moduli of Hardened Cement Paste, 1478

Simulation of Radial Collector Well in Shallow Alluvial Riverbed Aquifer Using Analytic Element Method, 1211

Tests and Analysis of Cantilevered GFRP Tubular Poles with Partial Concrete Filling, 187

Transient Hydrodynamic Dispersion in Rough Open Channels: Theoretical Analysis of Bed-Form Effects, 957

Water Table Fluctuation in the Presence of a Time-Varying Exponential Recharge and Depth-Dependent ET in a Two-Dimensional Aquifer System with an Inclined Base, 1255

Anchorages

Certifying That Existing Suspended Scaffold Structural Support Elements and Lifeline Anchorages Comply with Federal OSHA Requirements, 2149

Designing Suspended Scaffold Structural Support Elements and Lifeline Anchorages in Conformance with Federal OSHA Requirements, 2148

Development of Mechanical Anchor for CFRP Tendons Using Integrated Sleeve, 216

Direct Tension Pullout Bond Test: Experimental Results, 1680

Evaluation of Bond Strength in Concrete Elements Externally Reinforced with CFRP Sheets and Anchoring Devices, 229

FRP Strengthening of Full-Scale PC Girders, 228

Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116

Anchors

Development of Mechanical Anchor for CFRP Tendons Using Integrated Sleeve, 216

Experimental Behavior of Carbon Fiber-Reinforced Polymer (CFRP) Sheets Attached to Concrete Surfaces Using CFRP Anchors, 194

Linear Elastic Fracture Mechanics Pullout Analyses of Headed Anchors in Stressed Concrete, 533

Mechanics of Drag Embedment Anchors in a Soft Seabed, 780

Pullout Strength Models for FRP Anchors in Uncracked Concrete, 217

Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838

Thermoviscoelastic Analysis and Creep Testing of Ambient Temperature Cure Epoxies Used in Adhesive Anchor Applications, 1460

Three-Dimensional Large Deformation Finite-Element Analysis of Plate Anchors in Uniform Clay, 808

Undrained Capacity of Plate Anchors under General Loading, 908

Use of Mixed-Mode Fracture Interfaces for the Modeling of Large-Scale FRP-Strengthened Beams, 259

Animals

Guidelines for Roving Security Inspections in Public Venues Using Explosives Detection Dogs, 2254

Swine Wastewater Treatment Using Submerged Biofilm SBR Process: Enhancement of Performance by Internal Circulation through Sand Filter, 679

Treatment of Mixture of Sewage and Partially Treated Swine Wastewater by a Combination of UASB and Constructed Wetlands, 2122

Anisotropy

Anisotropy in the Spatial Distribution of Roller-Measured Soil Stiffness, 25

Closed-Form Solutions for Buckling of Long Anisotropic Plates with Various Boundary Conditions under Axial Compression, 569

Convexity of Yield Surface with Directional Distortional Hardening Rules, 507

Drained Deformation Behavior of Anisotropic Sands during Cyclic Rotation of Principal Stress Axes, 920

Elastoplastic Mesoscale Homogenization of Composite Materials, 520

Micromechanical Explanation of Elasticity and Strength of Gypsum: From Elongated Anisotropic Crystals to Isotropic Porous Polycrystals, 483

Micromechanical Modeling for Inherent Anisotropy in Granular Materials, 539

Simple Yield Surface Expressions Appropriate for Soil Plasticity, 29

Stress-Strain Responses of Block Samples of Compressible Chicago Glacial Clays, 790

Antennas

Characterization of Wireless Smart Sensor Performance, 601

Detrimental Effects on Coastal Concrete Structures by *Chaetomorpha Antennina*, 1440

Approximation methods

Estimating Reference Evapotranspiration with Minimum Data in Florida, 1254

Aprons

Thermal and Mechanical Properties at High Temperature of a Very High-Strength Durable Concrete, 1402

Aquatic habitats

Aquatic Habitat Bottom Classification Using ADCP, 978

Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053

Aquifers

Analytical Solution for Two-Dimensional Solute Transport in Finite Aquifer with Time-Dependent Source Concentration, 590

Analytical Study of Water Table Fluctuation in Unconfined Aquifers due to Varying Bed Slopes and Spatial Location of the Recharge Basin, 1147

Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682

Boundary Condition of Groundwater Flow through Sloping Seepage Face, 1129

Comparative Study of SVMs and ANNs in Aquifer Water Level Prediction, 299

Diagnostic Curves for Identifying Leaky Aquifer Parameters with or without Aquitard Storage, 1204

Effects of Primary Substrate Concentration on NDMA Transport during Simulated Aquifer Recharge, 652

Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221

Health-Risk-Based Remedial Alternatives for Contaminated Aquifer Management, 2101

Hydrological Effects of Bounding the Venice (Italy) Industrial Harbor by a Protection Cutoff Wall: Modeling Study, 1144

Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231

Optimization of Underground Water Pumping, 1246

River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289

Simple Method for Quick Estimation of Leaky-Aquifer Parameters, 1217

Simulation of Radial Collector Well in Shallow Alluvial Riverbed Aquifer Using Analytic Element Method, 1211

Standard Guideline for the Geostatistical Estimation and Block-Average of Homogeneous and Isotropic Saturated Hydraulic Conductivity, 2282

Three-Dimensional Semianalytical Solutions of Groundwater Flow to a Well in Fractured Wedge-Shaped Aquifers, 1153

Transport Characteristics in a 3D Groundwater Circulation Flow Field by Experimental and Numerical Investigations, 2115

Unsteady Solution for Well Recharge in a Low Diffusive Aquifer, 1293

Water Table Fluctuation in the Presence of a Time-Varying Exponential Recharge and Depth-Dependent ET in a Two-Dimensional Aquifer System with an Inclined Base, 1255

Arbitration

Consistency and Reliability of Construction Arbitration Decisions: Empirical Study, 1323

Mediation for Public Construction Contracts under the GPA in Taiwan, 1305

Arches

Can Soil Arching Be Insensitive to ϕ?, 24

Experimental Behavior of FRP Strengthened Masonry Arches, 207

Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517

Lewis Wernwag and the Colossus of 1812, 2152

Nonlinear Analysis of Masonry Arches Strengthened with Composite Materials, 557

Nonlinear Thermoelastic Buckling of Pin-Ended Shallow Arches under Temperature Gradient, 553

Architectural engineering

Architectural Engineering Curriculum at Missouri University of Science and Technology, 83

Learning Applications in the Architectural Engineering Educational Setting, 90

Principles and Practice of Engineering, 2271

Architecture

Assessing the Relevance of Media Synchronicity Theory to the Use of Communication Media in the AECO Industry, 81

Queuing Model for Assessing the Efficiency of Building Corridors, 76

Structural Design of the DRL-10 Space Pavilion, 88

Arid lands

Analysis and Synthesis of Transmission Loss Hydrographs, 1271

Analytical Model of Surge Flow in Nonprismatic Permeable Channels and Its Application in Arid Regions, 972

Effect of Time Scale on the Performance of Different Sediment Transport Formulas in a Semiarid Region, 947

Frequency Distribution of Extreme Hydrologic Drought of Southeastern Semiarid Region, Iran, 1083

Interbasin Water Transfer: Economic Water Quality-Based Model, 1209

Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222

Performance of Penman-Monteith FAO56 in a Semiarid Highland Environment, 1282

Regional Estimation of Reference Evapotranspiration in Arid and Semiarid Regions, 1279

Arizona

Combining Remotely Sensed Data and Ground-Based Radiometers to Estimate Crop Cover and Surface Temperatures at Daily Time Steps, 1225

Downstream-Water-Level Control Test Results on the WM Lateral Canal, 1250

Estimating an Impedance-to-Flow Parameter for Flood Peak Prediction in Semiarid Watersheds, 1074

Evaluating Watershed Experiments through Recursive Residual Analysis, 1239

Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251

Arkansas

Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628

Arsenic

Adsorption Mechanism of Arsenate on Crystal γ-Fe_2O_3 Nanoparticles, 712

Analysis of Regulatory Guidance Values for Residential Surface Soil Arsenic Exposure, 709

Arsenic and Fluoride Removal Using Simple Materials, 655

Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668

Disposal of Arsenic-Laden Adsorptive Media: Economic Analysis for California, 730

Evaluating the Mobility of Arsenic in Synthetic Iron-Containing Solids Using a Modified Sequential Extraction Method, 635

Modeling Arsenite Adsorption on Rusting Metallic Iron, 657

Modeling the Removal of Arsenic by Iron Oxide Coated Sand, 636

New Approach: Waste Materials as Sorbents for Arsenic Removal from Water, 753

Treatment of Arsenic-Laden Water Plant Sludge by Anaerobic Digestion, 2108

Artificial intelligence

Artificial Intelligence Techniques as Detection Tests for the Identification of Shifts in Hydrometric Data, 298

Comparison of Multivariate Regression and Artificial Neural Networks for Peak Urban Water-Demand Forecasting: Evaluation of Different ANN Learning Algorithms, 1130

Development and Verification of an Online Artificial Intelligence System for Detection of Bursts and Other Abnormal Flows, 1990

Entropic Risk Analysis by a High Level Decision Support System for Construction SMEs, 270

Modeling the Time Variation of Reservoir Trap Efficiency, 1155

Multiagent System for Construction Dispute Resolution (MAS-COR), 345

Predicting the Outcome of Construction Litigation Using an Integrated Artificial Intelligence Model, 269

Reset to Zero and Specify Active Safety Systems according to Real-World Needs, 1837

Scheduling Resource-Constrained Projects with Ant Colony Optimization Artificial Agents, 266

Techniques for Predicting Cracking Pattern of Masonry Wallet Using Artificial Neural Networks and Cellular Automata, 277

Artificial recharge

Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989

ASCE

ASCE Official Register 2010, 2227

Special Report: The Infrastructure Roundtables: Seeking Solutions to an American Crisis, 2173

ASCE publications

Seismic Loads, 2277

Snow Loads, 2278

ASCE Publications

Transactions of the American Society of Civil Engineers 2009, 2290

ASCE publications

Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681

Ashes

Carbon Neutral Off-White Rice Husk Ash as a Partial White Cement Replacement, 1464

Compaction Characteristics and Bearing Ratio of Pond Ash Stabilized with Lime and Phosphogypsum, 1378

Compressive Strength and Heat Evolution of Concretes Containing Palm Oil Fuel Ash, 1459

Laboratory-Scale Flotation Process for Treatment of Soils Contaminated with Both PAH and Lead, 728

Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

Strength and Carbonation Model of Rice Husk Ash Cement Mortar with Different Fineness, 1368

Asia

Challenges in Transportation Planning for Asian Cities, 1916

Asphalt pavements

Assessment of the Use of Hot-Mix Recycled Asphalt Concrete in Plant, 1913

Characterization of the Interaction Effect of Crumb Rubber Modified Binders Using HP-GPC, 1356

Comparative Study of Rheological Behavior of Modified Binders for High-Temperature Areas, 1452

Determining Thermal Conductivity of Paving Materials Using Cylindrical Sample Geometry, 1360

Drainability of Permeable Friction Course Mixtures, 1403

Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194

Dynamic Numerical Analysis of Antimoisture-Damage Mechanism of Permeable Pavement Base, 36

Evaluation of Longitudinal Joint Construction Techniques for Asphalt Pavements in Tennessee, 1468

Evaluation of the Use of Reclaimed Asphalt Pavement in Airfield HMA Pavements, 1809

Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials, 1407

Influence of Recycled Asphalt Pavement on Fatigue Performance of Asphalt Concrete Base Courses, 1413

Investigation of the Curing Mechanism of Foamed Asphalt Mixes Based on Micromechanics Principles, 1343

Long-Term Field Performance of Cold In-Place Recycled Roads in Iowa, 1522

Mesh-Independent Fracture Modeling for Overlay Pavement System under Heavy Aircraft Gear Loadings, 1828

Morphology of Asphalt Mixture Rheological Master Curves, 1433

New Parameter to Evaluate Moisture Damage of Asphalt-Aggregate Bond in Using Dynamic Shear Rheometer, 1370

Pavements and Materials, 2266

Performance Evaluation of No Track Thermoplastic Traffic Markings, 1896

Proposed Loading Waveforms and Loading Time Equations for Mechanistic-Empirical Pavement Design and Analysis, 1843

Sensitivity of Untreated Reclaimed Asphalt Pavement to Moisture, Density, and Freeze Thaw, 1487

Slippage Failure of a New Hot-Mix Asphalt Overlay, 1521

Stone-on-Stone Contact of Permeable Friction Course Mixtures, 1470

Time-Temperature Superposition for HMA with Growing Damage and Permanent Strain in Confined Tension and Compression, 1387

Toward Monte Carlo Simulation-Based Mechanistic-Empirical Prediction of Asphalt Pavement Performance, 1860

Asphalts

Application of Hansen Solubility Parameters to Predict Compatibility of SBS-Modified Bitumen, 1428

Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509

Assessing Reliability and Potentiality of Nonnuclear Portable Devices for Asphalt Mixture Density Measurement, 1442

Assessment of the Use of Hot-Mix Recycled Asphalt Concrete in Plant, 1913

Behavior of Bridge Asphalt Plug Joints under Thermal and Traffic Loads, 118

Characterization of Fatigue and Healing in Asphalt Binders, 1438

Characterization of Organic Surfactant on Montmorillonite Nanoclay to Be Used in Bitumen, 1431

Characterization of the Tensile Viscoelastic Properties of an Undamaged Asphalt Mixture, 1808

Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction, 1465

Comparative Performance of the SMAC Made with the SBS- and ST-Modified Binders, 1406

Coupled Micromechanical Model of Moisture-Induced Damage in Asphalt Mixtures, 1382

Deterioration of Bond Integrity between Repair Material and Concrete due to Thermal and Mechanical Incompatibilities, 1354

Determining Hardness and Elastic Modulus of Asphalt by Nanoindentation, 22

Determining Reliability of an Asphalt Mix Design: Case of Marshall Method, 1791

Development and Evaluation of the Hard-Grade Asphalt, 1432

Discrete Element Analysis of the Influences of Aggregate Properties and Internal Structure on Fracture in Asphalt Mixtures, 1341

Drainability of Permeable Friction Course Mixtures, 1403

Effect of Low-Density Polyethylene on Fracture Toughness of Asphalt Concrete Mixtures, 1457

Effect of Various Organomodified Montmorillonites on the Properties of Montmorillonite/Bitumen Nanocomposites, 1430

Effects of Aging on the Mechanical Characteristics of Bituminous Binders in PAC, 1429

Effects of Recycled Materials on Long-Term Performance of Cold In-Place Recycled Asphalt Roads, 1523

Factors Study in Low-Temperature Fracture Resistance of Asphalt Concrete, 1355

Field Verification of Superpave Dynamic Modulus, 1395

Impact of Polypropylene Application Method on Long-Term Aging of Polypropylene-Modified HMA, 1456

Influence of Antistripping Additives on Moisture Susceptibility of Warm Mix Asphalt Mixtures, 1461

Influence of Commercial Wax on Performance of Asphalt, 1426

Interactions of Granite and Asphalt Based on the Rheological Characteristics, 1435

Investigating the Effects of Curing Methods on the Compressive Strength of Bitublock, 1362

Investigation of the Curing Mechanism of Foamed Asphalt Mixes Based on Micromechanics Principles, 1343

Investigation of the Use of Lightweight Aggregate Hot-Mixed Asphalt in Flexible Pavements in Frost Susceptible Areas, 1358

Laboratory Evaluation of Moisture Susceptibility of Hot-Mix Asphalt Containing Cementitious Fillers, 1416

Laboratory Study on Ultraviolet Radiation Aging of Bitumen, 1427

Micromechanics of the Effects of Mixing Moisture on Foamed Asphalt Mix Properties, 1453

Modified Schapery's Model for Asphalt Sand, 503

Morphology of Asphalt Mixture Rheological Master Curves, 1433

Multiscale Curvature Analysis of Asphaltic Aggregate Particles, 308

Nanoscale Evaluation of Moisture Damage in Polymer Modified Asphalts, 1421

Parameter Identification Procedure for Heterogeneous Viscoelastic Composites Using Iterative Functions, 541

Postprocessing Method for Dynamic Modulus Tests of Hot-Mix Asphalt, 1415

Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410

Relationship between Molecular Compositions and Rheological Properties of Neat Asphalt Binder at Low and Intermediate Temperatures, 1490

Research on High- and Low-Temperature Properties of Asphalt-Mineral Filler Mastic, 1434

Triaxial Deformation Behavior of Bituminous Mixes, 1353

Triaxial Frequency Sweep Characterization of Asphalt-Aggregate Adhesion in Saskatchewan Asphaltic Mixes, 1806

Assessment

Assessing the Agreement among Pavement Condition Indexes, 1870

Assessment of Existing Structures Based on Identification, 1614

Comparative Assessment of Civil Infrastructure Network Performance under Probabilistic and Scenario Earthquakes, 1162

Condition Assessment of Corrosion-Distressed Reinforced Concrete Buildings Using Fuzzy Logic, 1552

Critical Assessment of Pavement Distress Segmentation Methods, 1789

Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578

Does a Technology Incubator Work in the Regional Economy? Evidence from South Korea, 1947

Evaluation of the Biocriteria of Streams in the San Diego Hydrologic Region, 684

Handling the Temperature Effect in Vibration Monitoring: Two Subspace-Based Analytical Approaches, 495

Importance of the Tail in Truck Weight Modeling for Bridge Assessment, 114

Machine Vision-Based Concrete Surface Quality Assessment, 335

Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420

Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289

Multivariate Statistical Approach to Structural Damage Detection, 460

Nondestructive Testing of GFRP Bridge Decks Using Ground Penetrating Radar and Infrared Thermography, 131

Probabilistic Approach for Budgeting in Portfolio of Projects, 350

Quantification of the Environmental Benefits of Ultrafine/Nanotitanium Dioxide Photocatalyst Coatings for Concrete Pavement Using Hybrid Life-Cycle Assessment, 1179

Quantitative Risk Assessment of Cut-Slope Projects under Construction, 933

Rating City and County of Denver Urban Pavement Constructability Using a Profiler, 2133

Simplified Damage Assessment Method for Buried Structures against External Blast Load, 1667

Structural Condition Assessment of Sewer Pipelines, 1512

Vibration Serviceability of a Building Floor Structure. II: Vibration Evaluation and Assessment, 1547

Assets

Assessing the Agreement among Pavement Condition Indexes, 1870

Asset Management for Urban Wastewater Pipeline Networks, 1174

Integrated Conveyance Condition Assessment Techniques Support Asset Management and Capacity Driven Projects, 1573

Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994

Astronomy

Modern Determination of Vertical Deflections Using Digital Zenith Cameras, 1766

Asymmetry

Asymmetry in Directional Spreading Function of Random Waves due to Refraction, 2030

Consolidation Behavior of Soils Subjected to Asymmetric Initial Excess Pore Pressure Distributions, 31

Graphical Determination of the Shear Center in Thin-Walled Asymmetrical U Profiles, 2147

Attenuation

Assessing of Natural Attenuation and Intrinsic Bioremediation Rates at a Petroleum-Hydrocarbon Spill Site: Laboratory and Field Studies, 615

Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116

Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

Australia

The Art of Science, 2172

Determinants of Efficient Risk Allocation in Privately Financed Public Infrastructure Projects in Australia, 328

Drought Analysis Using Trivariate Copulas Conditional on Climatic States, 1070

Experimental Estimation of the Relative Deterioration of Surface Maintenance Treatments, 1788

Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693

Influence of Platform Walking on BRT Station Bus Dwell Time Estimation: Australian Analysis, 1915

New Insights into the Quality of Urban Storm Water in South Eastern Australia, 654

Occupational Licensing of Building Trades: Case of Western Australia, 1603

Performance of a PRB for the Remediation of Acidic Groundwater in Acid Sulfate Soil Terrain, 862
Price Competitive Alliance Projects: Identification of Success Factors for Public Clients, 409
Rework in Civil Infrastructure Projects: Determination of Cost Predictors, 342
Work Stress, Support, and Mental Health in Construction, 379
Work-Family Conflict in Construction: Case for a Finer-Grained Analysis, 433

Automation

Application of Software for Automatic Canal Management (SacMan) to the WM Lateral Canal, 1249
Automated Generation of Customized Field Data Collection Templates to Support Information Needs of Cost Estimators, 274
Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185
Design of a Single-Pool Downstream Controller Using Quantitative Feedback Control Theory, 1275
Downstream-Water-Level Control Test Results on the WM Lateral Canal, 1250
Knowledge-Based Landslide Susceptibility Zonation System, 291
Multiobjective Water Quality Model Calibration Using a Hybrid Genetic Algorithm and Neural Network–Based Approach, 724
Object Recognition in Construction-Site Images Using 3D CAD-Based Filtering, 267
Role of Simulation in Construction Engineering and Management, 427
Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251
Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220

Auto-regressive models

Time Series Analysis of ENR Construction Cost Index, 436

Auto-regressive moving-average models

Time Series Analysis of ENR Construction Cost Index, 436

Axial forces

Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188
Behavior of Large-Scale Rectangular Columns Confined with FRP Composites, 182

Axial loads

Buckling of Variable Section Columns under Axial Loading, 506
Composite Flexural Behavior of Full-Scale Concrete-Filled Tubes without Axial Loads, 1744
Field Behavior of an Integral Abutment Bridge Supported on Drilled Shafts, 95
New Structural Model for Multicomponent Pile Cross Sections under Axial Load, 859
Numerical Study of an Integral Abutment Bridge Supported on Drilled Shafts, 96
Seismic Behavior of Reinforced Concrete Exterior Wide Beam-Column Joints, 1608

Axisymmetry

Closed-Form Solution of Axisymmetric Slender Elastic Toroidal Shells, 586
Linear Elastic Fracture Mechanics Pullout Analyses of Headed Anchors in Stressed Concrete, 533

Backfills

Can Soil Arching Be Insensitive to ϕ?, 24
Filling of a Flooded Gypsum Mine with a Flowable Soil-Cement Mix, 1411
Full-Scale Field Testing for Verification of Mechanical Properties of Polyurethane Foams for Use as Backfill in PCC Repairs, 1367
Implementation and Application of a New Elastoplastic Model Based on a Multiaxial Criterion to Assess the Stress State near Underground Openings, 13
Increased Lateral Abutment Resistance from Gravel Backfills of Limited Width, 795
Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449
Seismic Earth Pressures on Cantilever Retaining Structures, 903
Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills, 123

Bacteria

Bacterial Kinetics of Sulfur Oxidizing Bacteria and Their Biodeterioration Rates of Concrete Sewer Pipe Samples, 695
Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682
Contribution of the Estrogen-Degrading Bacterium *Novosphingobium* sp. Strain JEM-1 to Estrogen Removal in Wastewater Treatment, 711
Distribution of the Microbial Community Structure in Sulfur-Based Autotrophic Denitrification Columns, 666
Ferrous Salt Demand for Sulfide Control in Rising Main Sewers: Tests on a Laboratory-Scale Sewer System, 742
Impact of Storm-Water Runoff on Clogging and Fecal Bacteria Reduction in Sand Columns, 772
Model to Quantify Removal and Inactivation of Microorganisms Occluded in Effluent Wastewater Particles Using Filtration and Disinfection Systems, 739
Multivariate Polynomial Time-Series Models and Importance Ratios to Qualify Fecal Coliform Sources, 687
Statistical Evaluation of Factors Affecting Indicator Bacteria in Urban Storm-Water Runoff, 763
Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171

Baffles

Hydrodynamics of Secondary Settling Tanks and Increasing Their Performance Using Baffles, 612

Barrier beaches

Spatiotemporal Characteristics of Near-Bed Pressure Gradients on a Barred Beach, 2059

Barriers

Deformation and Cracking of Seepage Barriers in Dams due to Changes in the Pore Pressure Regime, 776
Diffusive Transport of VOCs through LLDPE and Two Coextruded Geomembranes, 889
Findings of Case Histories on the Long-Term Performance of Seepage Barriers in Dams, 775
Full-Scale Impact Test of Four Traffic Barriers on Top of an Instrumented MSE Wall, 815

Long-Term Capacity of Plant Mulch to Remediate Trichloroethylene in Groundwater, 727

Performance of a PRB for the Remediation of Acidic Groundwater in Acid Sulfate Soil Terrain, 862

Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Wave and Flow Response to an Artificial Surf Reef: Laboratory Measurements, 973

Bars

Behavior of GFRP Reinforcing Bars Subjected to Extreme Temperatures, 211

Bond Performance of GFRP Bars in Tension: Experimental Evaluation and Assessment of *ACI 440 Guidelines*, 242

Direct Tension Pullout Bond Test: Experimental Results, 1680

Effect of Contamination on Reinforcing Bar-Concrete Bond, 1515

Environmental Reduction Factors for GFRP Bars Used as Concrete Reinforcement: New Scientific Approach, 225

Evaluation of the Low-Cycle Fatigue Life in ASTM A706 and A615 Grade 60 Steel Reinforcing Bars, 1347

Experimental Investigation of the Axial Capacity of Inelastically Pretwisted Steel Bars, 560

Influence of Bracings on the Stability of Columns, 2154

Length Scales Interaction in Nonlocal Plastic Strain Localization of Bars of Varying Section, 561

Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213

Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212

Base course

Application of Shakedown Theory in Characterizing Traditional and Recycled Pavement Base Materials, 1813

Determination of Fatigue Life of a Granular Base Material Lightly Stabilized with Slag Lime from Indirect Diametral Tensile Testing, 1867

Influence of Recycled Asphalt Pavement on Fatigue Performance of Asphalt Concrete Base Courses, 1413

Investigation of Flexural Properties of Cement-Stabilized Macadam Reinforced with Polypropylene Fiber, 1489

Mechanistic Corrections for Determining the Resilient Modulus of Base Course Materials Based on Elastic Wave Measurements, 881

Base isolation

Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734

Basements, building

Ground Movements around Corners of Excavations: Empirical Calculation Method, 911

Slab-on-Grade versus Framed Slab, 94

Bathymetry

General Model to Represent Multiple Wetland and Lake Stage-Storage Behavior, 1134

Head Reconstruction Method to Balance Flux and Source Terms in Shallow Water Equations, 511

Bayesian analysis

Bayesian Network Enhanced with Structural Reliability Methods: Methodology, 583

Bayesian Network Enhanced with Structural Reliability Methods: Application, 584

Clustering Time Series of Sea Levels: Extreme Value Approach, 2048

Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783

Integrating Location Models with Bayesian Analysis to Inform Decision Making, 1980

Methodology for Bayesian Belief Network Development to Facilitate Compliance with Water Quality Regulations, 1168

Predictive and Diagnostic Load Rating Model of a Prestressed Concrete Bridge, 132

Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593

Structural Reliability Estimation with Vibration-Based Identified Parameters, 469

Validation and Application of Empirical Liquefaction Models, 931

Bays

New Relationships for Equilibrium Shaped Bays, 2050

Beach nourishment

Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309

Beaches

Estimating Alongshore Sediment Transport and the Nodal Point Location on the Delaware–Maryland Coast, 2042

Gateway to a Getaway, 2224

Laboratory Study of Low-Frequency Waves Induced by Random Gravity Waves on Sloping Beaches, 2041

Using Flotation to Separate Oil Spill Contaminated Beach Sands, 625

Beam columns

CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183

Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185

Finite-Element Model for Pretensioned Prestressed Concrete Girders, 1648

Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536

Fragility Assessment of Reduced Beam Section Moment Connections, 1720

Mixed Finite Element for Three-Dimensional Nonlinear Dynamic Analysis of Rectangular Concrete-Filled Steel Tube Beam-Columns, 592

Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740

Seismic Rehabilitation of Corner RC Beam-Column Joints Using CFRP Composites, 244

Seismic Response of FRP-Upgraded Exterior RC Beam-Column Joints, 195

Stability Capacity and Lateral Bracing Requirements of Wood Beam-Columns, 1628

State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181

Strength and Stiffness of Circular Concrete-Filled Tubes, 1757

Beams

Analysis of Snap-Back Instability due to End-Plate Debonding in Strengthened Beams, 479

Analytical Approach for Detection of Multiple Cracks in a Beam, 493

Bending, Buckling, and Vibration of Micro/Nanobeams by Hybrid Nonlocal Beam Model, 516

Buckling of a Weakened Infinite Beam on an Elastic Foundation, 513

Composite Flexural Behavior of Full-Scale Concrete-Filled Tubes without Axial Loads, 1744

Effect of Bracing on Linear Free Vibration Characteristics of Thin-Walled Beams with Open Cross Section, 487

Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550

Elastic Buckling of Cold-Formed Thin-Walled Channel Beams with Drop Flanges, 1695

Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500

Elongation of Reinforced Concrete Members Subjected to Cyclic Loading, 1711

Equilibrium-Based Finite-Element Formulation for the Geometrically Exact Analysis of Planar Framed Structures, 604

Evaluation of Masonry Deep Beams Externally Strengthened with CFRP Sheets, 191

Experimental Evaluation of Posttensioned Precast Concrete Coupling Beams, 1713

Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716

Finite Beam Element Considering Shear-Lag Effect in Box Girder, 570

Flexural Lateral Load Distribution Characteristics of Sandwich Plate System Bridges: Parametric Investigation, 159

Fragility Assessment of Reduced Beam Section Moment Connections, 1720

Frequency Spectrum Analysis of Impact-Echo Waveforms for T-Beams, 161

Fully Coupled 10-Degree-of-Freedom Beam Theory for Piecewise Straight Thin-Walled Beams with General Quadrilateral Cross Sections, 1762

Mechanical Behavior of an Innovative Hybrid Beam Made of Glulam and Ultrahigh-Performance Concrete Reinforced with FRP or Steel, 197

Mixed Finite Element for Three-Dimensional Nonlinear Dynamic Analysis of Rectangular Concrete-Filled Steel Tube Beam-Columns, 592

Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672

Multiple Scales Solution for a Beam with a Small Bending Stiffness, 466

Nonlinear, Large Deformation Finite-Element Beam/Column Formulation for the Study of the Human Spine: Investigation of the Role of Muscle on Spine Stability, 591

Preliminary Cost Estimation Model Using Case-Based Reasoning and Genetic Algorithms, 307

Seismic Behavior of Reinforced Concrete Exterior Wide Beam-Column Joints, 1608

Seismic Resistance Capacity of High-Rise Buildings Subjected to Long-Period Ground Motions: E-Defense Shaking Table Test, 1670

Shear Strength of Steel Fiber-Reinforced Ultrahigh-Performance Concrete Beams without Stirrups, 1743

Simple General Solution for Interfacial Stresses in Plated Beams, 220

Simplified Methodology for the Evaluation of the Residual Strength of Corroded Reinforced Concrete Beams, 1506

Slab-on-Grade versus Framed Slab, 94

Stability of Built-Up Timber Beams and Columns: Accounting for Modulus of Elasticity Variability, 2156

Use of Mixed-Mode Fracture Interfaces for the Modeling of Large-Scale FRP-Strengthened Beams, 259

Vibration Analysis of an Elastic Beam Subjected to a Moving Beam with Flexible Connections, 471

Bed forms

Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987

Determination of Form Friction Factor, 1080

Transient Hydrodynamic Dispersion in Rough Open Channels: Theoretical Analysis of Bed-Form Effects, 957

Bed loads

Case Study: Movable Bed Model Scaling for Bed Load Sediment Exclusion at Intake Structure on Rio Grande, 968

Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987

Effects of Bed Load and Suspended Load on Separation of Sands and Fines in Mixed Sediment, 2058

Evaluation of a Novel Approach to Determine the Critical Shields Stress, 1145

Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036

Experimental Study of Particle Motion on a Smooth Bed under Shoaling Waves Using Particle Image Velocimetry, 543

Nonintrusive Method for Detecting Particle Movement Characteristics near Threshold Flow Conditions, 1284

Sediment Transport on Arbitrary Slopes: Simplified Model, 974

Bed materials

Suspended Wash Load Transport of Nonuniform Sediments, 999

Bed ripples

Particle Fluxes into Permeable Sediments: Comparison of Mechanisms Mediating Deposition, 965

Bed roughness

Influence of Relative Roughness and Reynolds Number on the Roll-Waves Spatial Evolution, 943

Physically Realistic Roughness Closure Scheme to Simulate Turbulent Channel Flow over Rough Beds within the Framework of LES, 1026

Unsteady Turbulence in Tidal Bores: Effects of Bed Roughness, 2051

Bedrock

Modeling of Rainfall-Induced Shallow Landslides of the Flow-Type, 782

Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838

Bench marks

Addressing Sustainability in Benchmarking Framework for Indian Urban Water Utilities, 1171

Benchmarking Framework to Measure Extent of ICT Adoption for Building Project Management, 368

Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708

Efficiency Measurement of Bridge Maintenance Using Data Envelopment Analysis, 1165

Bending

Application of the Analytical Strip Method to Antisymmetric Laminates, 588

Bend Strength of FRP Stirrups: Comparison and Evaluation of Testing Methods, 177

Bending, Buckling, and Vibration of Micro/Nanobeams by Hybrid Nonlocal Beam Model, 516

Closed-Form Solution of Axisymmetric Slender Elastic Toroidal Shells, 586

Experimental Investigation of Bending Fatigue Response of Grouted Stay Cables, 106

Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693

Group Interaction Effects on Laterally Loaded Piles in Clay, 830

I-35W Bridge Collapse, 151

Long-Term Behavior of Composite Beams under Positive and Negative Bending. I: Experimental Study, 1691

Long-Term Behavior of Composite Beams under Positive and Negative Bending. II: Analytical Study, 1692

Mechanical Behavior of an Innovative Hybrid Beam Made of Glulam and Ultrahigh-Performance Concrete Reinforced with FRP or Steel, 197

Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626

Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710

Multiple Scales Solution for a Beam with a Small Bending Stiffness, 466

Performance of a Nongasketed Flange Joint under Combined Internal Pressure and Bending Loading, 607

Shear Performance of RC Bridge Girders Reinforced with Carbon FRP Stirrups, 98

Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689

Structural Reliability of Prestressed UHPC Flexure Models for Bridge Girders, 100

Unified Approach to the Characterization of Coupled Composite Laminates: Benchmark Configurations and Special Cases, 64

Weighted Residual Numerical Differentiation Algorithm Applied to Experimental Bending Moment Data, 857

Benefit cost ratios

Benefits and Barriers of Construction Project Monitoring Using High-Resolution Automated Cameras, 377

Case Study on the Accuracy and Cost/Effectiveness in Simulating Reference Evapotranspiration in West-Central Florida, 1125

Hybrid Model Incorporating Real Options with Process Centric and System Dynamics Modeling to Assess Value of Investments in Alternative Dispute Resolution Techniques, 300

Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088

Life-Cycle Costs of Commercial Roof Systems, 79

Study of Real Options with Exogenous Competitive Entry to Analyze Dispute Resolution Ladder Investments in Architecture, Engineering, and Construction Projects, 352

Bentonite

Feasibility of Using Coal Fly Ash for Mine Waste Containment, 690

Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829

Membrane Behavior of Compacted Clay Liners, 907

Berms

Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045

Best Management Practice

Charrettes as a Method for Engaging Industry in Best Practices Research, 321

Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629

Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Effect of Preconstruction Planning Effort on Sheet Metal Project Performance, 338

Establishing Storm-Water BMP Evaluation Metrics Based upon Ambient Water Quality Associated with Benthic Macroinvertebrate Populations, 673

Evaluation of Storm-Water Wetlands in Series in Piedmont North Carolina, 624

Explanation for Anomalous Readings during Monitoring of a Best Management Practice, 1258

Fines Accumulation and Distribution in a Storm-Water Rain Garden Nine Years Postconstruction, 1292

Frequency Methodology for Evaluating Urban and Highway Storm-Water Quality Control Infiltration BMPs, 1983

Hydraulic Model for Sedimentation in Storm-Water Detention Basins, 672

Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088

Incentive Index Developed to Evaluate Storm-Water Low-Impact Designs, 761

Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096

Long-Term Simulation of a System for Catchment, Pretreatment, and Treatment of Polluted Runoff Water, 773

Modeling Techniques of Best Management Practices: Rain Barrels and Rain Gardens Using EPA SWMM-5, 1099

Modeling Water Table Mounding and Contaminant Transport beneath Storm-Water Infiltration Basins, 1152

Optimization of Watershed Control Strategies for Reservoir Eutrophication Management, 1291
Parking Deck's First Flush, 1069
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095
Rational Three-Step Method for Optimizing Value of Civil Engineering Research, 1322
Review of Bioretention System Research and Design: Past, Present, and Future, 710
Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623
Runoff Characteristics for Construction Site Erosion Control Practices, 1245
Thermal Reduction by an Underground Storm-Water Detention System, 671
Transport and Distribution of Particulate Matter Phosphorus Fractions in Rainfall-Runoff from Roadway Source Areas, 744
Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103
Urban Storm-Water Quality Management: Centralized versus Source Control, 1986
Volumetric Filtration of Rainfall Runoff. I: Event-Based Separation of Particulate Matter, 759

Biaxial loads

Experimental Studies of Reinforced Concrete Bridge Columns under Axial Load Plus Biaxial Bending, 1607
Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710
Stability Capacity and Lateral Bracing Requirements of Wood Beam-Columns, 1628

Biaxial tests

Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509
Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185
Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26
Experimental Studies of Reinforced Concrete Bridge Columns under Axial Load Plus Biaxial Bending, 1607
Nonlocal Multilaminate Model for Strain Softening Analysis, 15

Bicycles

Willingness to Shift to Walking or Bicycling to Access Suburban Rail: Case Study of Mumbai, India, 1917

Bids

Below-Average Bidding Method, 408
Contractors' Competition Strategies in Bidding: Hong Kong Study, 420
Modeling the Heterogeneity in Contractors' Mark-Up Behavior, 386
Quantitative Methods for Design-Build Team Selection, 405
Relief from Bid Mistakes, 1304
Revisiting the Strengths and Limitations of Regulatory Contracts in Infrastructure Industries, 1197
SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractor for Bonding, 435

Bifurcations

New Approach for Predicting Flow Bifurcation at Right-Angled Open-Channel Junction, 1010
Nonlinear Thermoelastic Buckling of Pin-Ended Shallow Arches under Temperature Gradient, 553
Shear Band Formation Observed in Ring Shear Tests on Sandy Soils, 809

Binders, material

Characterization of Fatigue and Healing in Asphalt Binders, 1438
Characterization of the Interaction Effect of Crumb Rubber Modified Binders Using HP-GPC, 1356
Comparative Performance of the SMAC Made with the SBS- and ST-Modified Binders, 1406
Comparative Study of Rheological Behavior of Modified Binders for High-Temperature Areas, 1452
Determining Hardness and Elastic Modulus of Asphalt by Nanoindentation, 22
Durability and Environmental Performance of Alkali-Activated Tungsten Mine Waste Mud Mortars, 1444
Effects of Aging on the Mechanical Characteristics of Bituminous Binders in PAC, 1429
Effects of Calcium Carbide Residue–Fly Ash Binder on Mechanical Properties of Concrete, 1474
Influence of Commercial Wax on Performance of Asphalt, 1426
Optimization of Cement Grouts Containing Silica Fume and Viscosity Modifying Admixture, 1377
Ranking Binder Creep Performance Using the ARRB Elastometer, 1391
Relationship between Molecular Compositions and Rheological Properties of Neat Asphalt Binder at Low and Intermediate Temperatures, 1490

Bioengineering

Nonlinear, Large Deformation Finite-Element Beam/Column Formulation for the Study of the Human Spine: Investigation of the Role of Muscle on Spine Stability, 591

Biofilm

Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713
Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123
Ferrous Salt Demand for Sulfide Control in Rising Main Sewers: Tests on a Laboratory-Scale Sewer System, 742
Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas. I, 9
Swine Wastewater Treatment Using Submerged Biofilm SBR Process: Enhancement of Performance by Internal Circulation through Sand Filter, 679

Biological processes

Anaerobic Biodegradation of Polyhydroxybutyrate in Municipal Sewage Sludge, 693
Assessing of Natural Attenuation and Intrinsic Bioremediation Rates at a Petroleum-Hydrocarbon Spill Site: Laboratory and Field Studies, 615
Biocover Performance of Landfill Methane Oxidation: Experimental Results, 702
Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682

Bioengineering Techniques Associated with Soil Nailing Applied to Slope Stabilization and Erosion Control, 2082

Biological and Abiotic Color Reduction of Paper Mill Effluents during Anaerobic Composting, 692

Biosorptive Color Removal: Applicability of Equilibrium Isotherm Models, 2098

Clean up of Petroleum-Hydrocarbon Contaminated Soils Using Enhanced Bioremediation System: Laboratory Feasibility Study, 681

Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668

Contribution of the Estrogen-Degrading Bacterium *Novosphingobium* sp. Strain JEM-1 to Estrogen Removal in Wastewater Treatment, 711

Design of Integrated Bioinfiltration-Detention Urban Retrofits with Design Storm and Continuous Simulation Methods, 1104

Development of a Kinetic Model for the Biosorption of Cationic Dyes by Dead Macrofungi, 667

Development of a Novel Internal Electrolysis System by Iron Connected with Carbon: Treatment of Nitroaromatic Compounds and Case of Engineering Application, 719

Effect of Carbon Source on Biological Nitrogen and Phosphorus Removal in an Anaerobic-Anoxic-Oxic (A^2O) Process, 749

Effects of Primary Substrate Concentration on NDMA Transport during Simulated Aquifer Recharge, 652

Efficient Microwave Technology to Immobilize Heavy Metal Copper (Cu) Contaminated Soil by Microwave Energy, 2097

Emerging Contaminants of Environmental Concern: Source, Transport, Fate, and Treatment, 2096

Environmental Biotechnology in Water and Wastewater Treatment, 650

Estimation of Evapotranspiration from Bioretention Areas Using Weighing Lysimeters, 1108

Evaluation of the Biocriteria of Streams in the San Diego Hydrologic Region, 684

Evidence and Long-Term Feasibility of Enhanced Biological Phosphorus Removal in Oxidation-Ditch Type of Aerated-Anoxic Activated Sludge Systems, 748

Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123

Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614

Giving It Juice, 2212

Granular Activated Carbon Adsorption of 2-Methylisoborneol (MIB): Pilot- and Laboratory-Scale Evaluations, 718

Hydraulic Test of a Bioretention Media Carbon Amendment, 1109

Impacts of Construction Activity on Bioretention Performance, 1094

Improved Passive Treatment of Acid Mine Drainage in Mushroom Compost Amended with Crab-Shell Chitin, 683

In Situ Microscale Analyses of Activated Sludge Flocs in the Enhanced Biological Phosphate Removal Process by the Use of Microelectrodes and Fluorescent In Situ Hybridization, 676

Modeling Evaporative Water Loss from the On-Farm Reservoir with Biological Shading, 1111

Performance of North American Bioreactor Landfills. II: Chemical and Biological Characteristics, 707

Removal of Heavy Metal Ions by Waste Biomass of *Saccharomyces Cerevisiae*, 619

Review of Bioretention System Research and Design: Past, Present, and Future, 710

Secondary Compression of Municipal Solid Wastes and a Compression Model for Predicting Settlement of Municipal Solid Waste Landfills, 843

Treatment of Drilling Wastewater by Combined Coagulation-Ultraviolet/Fenton-Pressurized Biological Processes, 641

Use of Ozone-Photocatalytic Oxidation (O_3/UV/TiO_2) and Biological Remediation for Treatment of Produced Water from Petroleum Refineries, 613

Biomass

Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682

Bioenergy and Biofuel from Biowastes and Biomass, 2228

Compressive Strength and Heat Evolution of Concretes Containing Palm Oil Fuel Ash, 1459

Joint Water Quantity-Quality Management in a Biofuel Production Area—Integrated Economic-Hydrologic Modeling Analysis, 2009

Removal of Heavy Metal Ions by Waste Biomass of *Saccharomyces Cerevisiae*, 619

Blast loads

Air-Blast Effects on Structural Shapes of Finite Width, 1621

Design of Blast-Resistant Buildings in Petrochemical Facilities, 2234

Dynamic Response of Retrofitted Masonry Walls for Blast Loading, 542

Explosion Performance of a Ball Powder Production Facility, 1528

Explosion Phenomena and Effects of Explosions on Structures. I: Phenomena and Effects, 2143

Explosion Phenomena and Effects of Explosions on Structures. II: Methods of Analysis (Explosion Effects), 2144

Explosion Phenomena and Effects of Explosions on Structures. III: Methods of Analysis (Explosion Damage to Structures) and Example Cases, 2145

Finite-Element Analysis of Fluid-Structure Interaction in a Blast-Resistant Window System, 1636

Simplified Damage Assessment Method for Buried Structures against External Blast Load, 1667

Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

Verification of Nondimensional Energy Spectrum-Based Blast Design for Reinforced Concrete Members through Actual Blast Tests, 1669

Blasting

Assessment of the Electromagnetic Disturbance of a Glass Fiber Reinforced Composite Fencing Structure, 239

Blast Limits for Transmission Structures. I: Response Spectra Development, 1500

Blast Limits for Transmission Structures. II: Structural Response and Blast Limit Development, 1501

Building Robustness Research during World War II, 1549

Design of Blast-Resistant Buildings in Petrochemical Facilities, 2234

Is Construction Blasting Still Abnormally Dangerous?, 1311

Response of an Elastic Structure Subject to Air Shock Considering Fluid-Structure Interaction, 59

Blocks

Block Ramp Design for Efficient Energy Dissipation, 446

Stability of Shallow Tunnel Using Rigid Blocks and Finite-Element Upper Bound Solutions, 38

Bolts

Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701

Performance of a Nongasketed Flange Joint under Combined Internal Pressure and Bending Loading, 607

Prediction of Net-Tension Strength for Multirow Bolted Connections of Pultruded Material Using the Hart-Smith Semiempirical Modeling Approach, 186

Seismic Performance Factors for Cold-Formed Steel Special Bolted Moment Frames, 1702

Bonding

Analysis of Snap-Back Instability due to End-Plate Debonding in Strengthened Beams, 479

Bond Behavior in Steel Fiber-Reinforced Concrete Zones under Static and Cyclic Loading: Experimental Evaluations and Analytical Modeling, 1417

Bond Performance of GFRP Bars in Tension: Experimental Evaluation and Assessment of *ACI 440 Guidelines*, 242

Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512

CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183

Direct Tension Pullout Bond Test: Experimental Results, 1680

Durability of Wet Bond of Hybrid Laminates to Cast-in-Place Concrete, 196

Effect of Contamination on Reinforcing Bar-Concrete Bond, 1515

Evaluation of Bond Strength in Concrete Elements Externally Reinforced with CFRP Sheets and Anchoring Devices, 229

Experimental Behavior of Carbon Fiber-Reinforced Polymer (CFRP) Sheets Attached to Concrete Surfaces Using CFRP Anchors, 194

Experimental Investigation of the Influence of Moisture on the Bond Behavior of FRP to Concrete Interfaces, 258

FE Modeling of FRP-Repaired Planar Concrete Elements Subjected to Monotonic and Cyclic Loading, 247

Front and Side View Image Correlation Measurements on FRP to Concrete Pull-Off Bond Tests, 222

Full Torsional Behavior of RC Beams Wrapped with FRP: Analytical Model, 205

Glued Composite Timber-Concrete Beams. I: Interlayer Connection Specimen Tests, 1729

Glued Composite Timber-Concrete Beams. II: Analysis and Tests of Beam Specimens, 1730

Grooving as Alternative Method of Surface Preparation to Postpone Debonding of FRP Laminates in Concrete Beams, 255

Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227

Interface Behavior of a Bimaterial Plate under Dynamic Loading, 579

Investigation into the Effect of Bonding on FRP-Wrapped Cylindrical Concrete Columns, 246

Mesomechanical Model for Numerical Study of Two-Dimensional Triaxially Braided Composite, 595

New Approach for Modeling the Contribution of NSM FRP Strips for Shear Strengthening of RC Beams, 180

Nonlinear Analysis of Masonry Arches Strengthened with Composite Materials, 557

Numerical Modeling of Concrete-FRP Debonding Using a Crack Band Approach, 178

Slippage Failure of a New Hot-Mix Asphalt Overlay, 1521

Stresses in External and Internal Unbonded Tendons: Unified Methodology and Design Equations, 1712

SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractors for Bonding, 435

Bottom ash

Experimental Evaluation of Strength Characteristics of Stabilized Dredged Soil, 1401

Boulders

Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053

Boundaries

Block Element Method for the Seismic Stability of Rock Slopes, 930

Boundary Condition of Groundwater Flow through Sloping Seepage Face, 1129

Closed-Form Solutions for Buckling of Long Anisotropic Plates with Various Boundary Conditions under Axial Compression, 569

Complex Frequencies in Elastodynamics, with Application to the Damping-Solvent Extraction Method, 522

Determining the Shapes of Yield Curves for Unsaturated Soils by Modified State Surface Approach, 796

Global Economic Forces' Effect upon Urban Planning: Greater Amman Case Study, 1930

Junction and Drop-Shaft Boundary Conditions for Modeling Free-Surface, Pressurized, and Mixed Free-Surface Pressurized Transient Flows, 1015

Boundary element method

Worst-Case Pointwise Discretization Error Bounds for Systems with Geometrically Induced Singular Flux Solutions Using Interval Boundary Element Method, 529

Boundary layers

Critical Depth Relationships in Developing Open-Channel Flow, 960

Determination of Form Friction Factor, 1080

Multiple Scales Solution for a Beam with a Small Bending Stiffness, 466

Velocity Profile and Flow Resistance Models for Developing Chute Flow, 989

Boundary shear

Depth-Averaged Shear Stress and Velocity in Open-Channel Flows, 1043

Boussinesq equations
Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039
Extended Boussinesq Equations for Water-Wave Propagation in Porous Media, 521
Influence of Nonlinearity on the Stress Distribution in the Soil—Application to Road Engineering Problems, 1797
Wave-Breaking Model for Boussinesq-Type Equations Including Roller Effects in the Mass Conservation Equation, 2031

Box beams
Distribution Factors for Short-Haul Vehicular Loads on Prestressed Concrete Open Box Beam (U-Beam) Bridges, 2140
Failure Mechanism of Empty and Concrete-Filled CFRP Box Beams, 209

Box girders
Finite Beam Element Considering Shear-Lag Effect in Box Girder, 570

Bracing
Behavior of Prestressed Steel Beams, 1719
Buried Pipeline Response to Braced Excavation Movements, 1518
Cyclic Behavior of Diagrid Nodes with H-Section Braces, 1717
Effect of Bracing on Linear Free Vibration Characteristics of Thin-Walled Beams with Open Cross Section, 487
Estimating the Stiffness of Eccentrically Braced Frames, 2139
Influence of Bracings on the Stability of Columns, 2154
Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740
Reduced Link Sections for Improving the Ductility of Eccentrically Braced Frame Link-to-Column Connections, 1662
Seismic Column Demands in Ductile Braced Frames, 2
Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838
Stability Capacity and Lateral Bracing Requirements of Wood Beam-Columns, 1628
Stability Capacity of Metal Plate Connected Wood Truss Assemblies, 1679

Brazil
Joint Water Quantity-Quality Management in a Biofuel Production Area—Integrated Economic-Hydrologic Modeling Analysis, 2009

Breaking waves
Direct Formula to Compute Wave Height and Angle at Incipient Breaking, 2040
Model of Nearshore Waves and Wave-Induced Currents around a Detached Breakwater, 2044
Spatiotemporal Characteristics of Near-Bed Pressure Gradients on a Barred Beach, 2059
Wave and Flow Response to an Artificial Surf Reef: Laboratory Measurements, 973
Wave-Breaking Model for Boussinesq-Type Equations Including Roller Effects in the Mass Conservation Equation, 2031

Breakwaters
Hydrodynamic Performance of Single- and Double-Wave Screens, 2034
Model of Nearshore Waves and Wave-Induced Currents around a Detached Breakwater, 2044

Bricks
Assessment of Mortar and Brick Strength in Earthquake-Affected Structures in Peru Using a Schmidt Hammer, 1560
Development and Validation of 3D Composite Structural Elements at Elevated Temperatures, 1634
FRP Confinement of Tuff and Clay Brick Columns: Experimental Study and Assessment of Analytical Models, 235
In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. I: Experimental Investigation, 250
In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. II: Finite-Element Model, 251
Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420
Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685
Recycled Red-Clay Ceramic Construction and Demolition Waste for Mortars Production, 1366
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176

Bridge abutments
Bridge Scour: Prediction, Modeling, Monitoring, and Countermeasures—Review, 2142
Field Behavior of an Integral Abutment Bridge Supported on Drilled Shafts, 95
Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97
Increased Lateral Abutment Resistance from Gravel Backfills of Limited Width, 795
Integral Abutment Bridges: The European Way, 2150
Numerical Study of an Integral Abutment Bridge Supported on Drilled Shafts, 96
Optimum Design of Bridge Abutments under Seismic Conditions: Reliability-Based Approach, 112
Temporal Scales for Live-Bed Scour at Abutments, 985
Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills, 123

Bridge decks
Bridge Deck Patching Material Evaluation, 163
Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509
Concrete Slab Installed with Carbon Fiber Heating Wire for Bridge Deck Deicing, 1841
Dynamic Identification of a Concrete Bridge with Orthotropic Plate-Type Deck, 1666
Experimental Performance of Full-Depth Precast, Prestressed Concrete Overhang, Bridge Deck Panels, 142
Fatigue and Strength Evaluation of Two Glass Fiber-Reinforced Polymer Bridge Decks, 122
Field Monitoring and Repair of a Glass Fiber-Reinforced Polymer Bridge Deck, 1516

Flexural Lateral Load Distribution Characteristics of Sandwich Plate System Bridges: Parametric Investigation, 159

Identifying Critical Sources of Bridge Deterioration in Cold Regions through the Constructed Bridges in North Dakota, 146

Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Concept Development, 125

Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Fatigue Evaluation, 143

Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105

Moving-Wheel Fatigue for Bridge Decks Strengthened with CFRP Strips Subject to Negative Bending, 253

Nondestructive Testing of GFRP Bridge Decks Using Ground Penetrating Radar and Infrared Thermography, 131

Relaxing the Stud Spacing Limit for Full-Depth Precast Concrete Deck Panels Supported on Steel Girders (Phase I), 140

Steel Hexagonal Honeycomb Core Equivalent Elastic Moduli for Bridge Deck Sandwich Panels, 45

Sustained-Load and Fatigue Performance of a Hybrid FRP-Concrete Bridge Deck System, 260

Bridge failures

Bridge Health Index for the City and County of Denver, Colorado. I: Current Methodology, 1554

Bridge Health Index for the City and County of Denver, Colorado. II: Denver Bridge Health Index, 1555

Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509

Comparison of Block-Shear and Whitmore Section Methods for Load Rating Existing Steel Truss Gusset Plate Connections, 110

I-35W Bridge Collapse, 151

Reliability-Based Modeling of Bridge Deterioration Hazards, 158

Bridge foundations

Current Design and Construction Practices of Bridge Pile Foundations with Emphasis on Implementation of LRFD, 166

Bridge inspection

Bridge Inspection Practice: Two Different North American Railways, 136

Deterioration Rates of Typical Bridge Elements in New York, 134

Forensic Examination of a Noncomposite Adjacent Precast Prestressed Concrete Box Beam Bridge, 133

Predictive and Diagnostic Load Rating Model of a Prestressed Concrete Bridge, 132

Proposed Method for Determining the Interval for Hands-on Inspection of Steel Bridges with Fracture Critical Members, 127

Using Soft Computing to Analyze Inspection Results for Bridge Evaluation and Management, 135

Bridge maintenance

Bridge Health Index for the City and County of Denver, Colorado. I: Current Methodology, 1554

Bridge Health Index for the City and County of Denver, Colorado. II: Denver Bridge Health Index, 1555

Bridge tests

Experimental Studies of Reinforced Concrete Bridge Columns under Axial Load Plus Biaxial Bending, 1607

Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97

Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111

Bridges

Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312

Aging Considerations in the Development of Time-Dependent Seismic Fragility Curves, 1753

Artificial Neural Network Model of Bridge Deterioration, 1556

Behavior of Bridge Asphalt Plug Joints under Thermal and Traffic Loads, 118

Behavior of Hollow Tubular-Flange Girder Systems for Curved Bridges, 1624

Bridge Model Updating Using Response Surface Method and Genetic Algorithm, 147

Bridge Pier Scour under Flood Waves, 1031

Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812

Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509

Charles Macdonald, 148

Combined Effort, 2201

Combined Effort

Data and Modeling Issues Faced during the Efficiency Measurement of Road Maintenance Using Data Envelopment Analysis, 1164

Design and Evaluation of Experimental Bridges in Tennessee, 1498

Detection of Vehicles with Studded Tires Using Acoustic Emission Sensors Mounted to Highway Bridges, 1839

Deterioration Rates of Typical Bridge Elements in New York, 134

Directional Effects of Shear Combined with Compression on Bridge Elastomeric Bearings, 101

Distribution Factors for Short-Haul Vehicular Loads on Prestressed Concrete Open Box Beam (U-Beam) Bridges, 2140

Dynamic Identification of a Concrete Bridge with Orthotropic Plate-Type Deck, 1666

Effect of Intermediate Diaphragms on Decked Bulb-Tee Bridge System for Accelerated Construction, 162

Efficiency Measurement of Bridge Maintenance Using Data Envelopment Analysis, 1165

End Forces on Crossframes in Horizontally Curved Steel I-Girder Bridges, 2130

Equivalent Barge and Flotilla Impact Forces on Bridge Piers, 144

Experimental Investigation of Clear-Water Local Scour of Compound Piers, 979

Experimental Study of Three-Dimensional Flow Field around a Complex Bridge Pier, 473

Fatigue and Strength Evaluation of Two Glass Fiber-Reinforced Polymer Bridge Decks, 122

Field Monitoring and Repair of a Glass Fiber-Reinforced Polymer Bridge Deck, 1516

Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554

Frequency Spectrum Analysis of Impact-Echo Waveforms for T-Beams, 161

Genetic Programming to Predict Bridge Pier Scour, 958

Impact of Bridge Rail Geometry on Floodplain Analysis, 1156

Importance of the Tail in Truck Weight Modeling for Bridge Assessment, 114

Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Concept Development, 125

Inclusion of Crawl Tests and Long-Term Health Monitoring in Bridge Serviceability Analysis, 124

Investigation on the Impact of Seasonally Frozen Soil on Seismic Response of Bridge Columns, 139

Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116

Large-Scale Experimental Study of Precast Segmental Unbonded Posttensioned Concrete Bridge Columns for Seismic Regions, 1632

Lateral Spreading Forces on Bridge Piers and Pile Caps in Laterally Spreading Soil: Effect of Angle of Incidence, 928

Lewis Wernwag and the Colossus of 1812, 2152

Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510

Multimodel Structural Performance Monitoring, 1736

Performance of a Retrofitted Medieval Stone Bridge under a Severe Flood, 1545

Performance of Bridge Materials by Structural Deficiency Analysis, 1530

Precise Control Survey for Erecting the Steel Pylons of the Third Nanjing Yangtze River Bridge, China: Case Study, 1769

Preliminary Cost Estimation Model Using Case-Based Reasoning and Genetic Algorithms, 307

Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451

Probabilistic Performance-Based Procedure to Evaluate Pile Foundations at Sites with Liquefaction-Induced Lateral Displacement, 819

Proposal of an Integrated Index for Prioritization of Bridge Maintenance, 126

Proposed Method for Determining the Interval for Hands-on Inspection of Steel Bridges with Fracture Critical Members, 127

Rotation Requirements for Moment Redistribution in Steel Bridge I-Girders, 121

Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238

Selection of Durable Closure Pour Materials for Accelerated Bridge Construction, 160

Sensor Network for Structural Health Monitoring of a Highway Bridge, 263

Stability Analysis of Bay Bridge Saddle Configuration, 1764

Theoretical Studies of the XY-FP Seismic Isolation Bearing for Bridges, 154

Bridges, arch

Cabin John Bridge: Role of Alfred L. Rives, C.E., 1514

Finite-Element Analysis and Vibration Testing of a Two-Span Masonry Arch Bridge, 1499

Time-Dependent Behavior of Concrete-Filled Steel Tubular Arch Bridge, 104

Bridges, box girder

Forensic Examination of a Noncomposite Adjacent Precast Prestressed Concrete Box Beam Bridge, 133

Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129

Bridges, cable-stayed

Dynamic Analysis of a Composite Cable-Stayed Bridge: Escaleritas Viaduct, 156

Engineering the Tower and Main Span Construction of Stonecutters Bridge, 108

Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128

Experimental Investigation of Bending Fatigue Response of Grouted Stay Cables, 106

Worth the Wait, 2213

Bridges, cantilever

C. Shaler Smith, 113

Joseph B. Strauss, Charles A. Ellis, and the Golden Gate Bridge: Justice at Last, 1589

Bridges, concrete

Active Confinement of Reinforced Concrete Bridge Columns Using Shape Memory Alloys, 102

Differences between Calculated and Measured Long-Term Deflections in a Prestressed Concrete Girder Bridge, 1557

Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130

Engineering the Tower and Main Span Construction of Stonecutters Bridge, 108

Experimental Performance of Full-Depth Precast, Prestressed Concrete Overhang, Bridge Deck Panels, 142

Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111

Predictive and Diagnostic Load Rating Model of a Prestressed Concrete Bridge, 132

Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593

Seismic Response and Fragility of Deteriorated Reinforced Concrete Bridges, 1733

Shear Performance of RC Bridge Girders Reinforced with Carbon FRP Stirrups, 98

Bridges, covered

Lewis Wernwag and the Colossus of 1812, 2152

Theodore Burr and the Harrisburg Old Camelback Bridge, 2151

Bridges, girder

Differences between Calculated and Measured Long-Term Deflections in a Prestressed Concrete Girder Bridge, 1557

FRP Strengthening of Full-Scale PC Girders, 228

Gateway to a Getaway, 2224

Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105

Interface Shear Connection Analysis of Ultrahigh-Performance Fiber-Reinforced Concrete Composite Girders, 141

Load Configuration and Lateral Distribution of NATO Wheeled Military Trucks for Steel I-Girder Bridges, 165

Rapid Girder Selection and Cost Estimation for Simple-Made-Continuous Steel Bridge Design, 2158
Relaxing the Stud Spacing Limit for Full-Depth Precast Concrete Deck Panels Supported on Steel Girders (Phase I), 140
Rotation Compatibility Approach to Moment Redistribution for Design and Rating of Steel I-Girder Bridges, 99
Rotation Requirements for Moment Redistribution in Steel Bridge I-Girders, 121
Shear Performance of RC Bridge Girders Reinforced with Carbon FRP Stirrups, 98
Shear Strength of a Lightweight Self-Consolidating Concrete Bridge Girder, 152
Steel Girder Stability during Bridge Erection: AASHTO LRFD Check on L/b Ratios, 167
Structural Reliability of Prestressed UHPC Flexure Models for Bridge Girders, 100

Bridges, highway

Characterization of a Roller Seismic Isolation Bearing with Supplemental Energy Dissipation for Highway Bridges, 1658
Deterioration Rates of Typical Bridge Elements in New York, 134
Gateway to a Getaway, 2224
In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study, 150
Long-Term Wireless Structural Health Monitoring of the Ferriby Road Bridge, 109
Peerless Pier Caps, 2219
Planning for Commercial Vehicle Weight Limit Change: Application and Computer Software, 2129
Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593
Reliability-Based Modeling of Bridge Deterioration Hazards, 158
Roadway Reinvention, 2197
Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. I: Bridge Modeling, Parametric Analysis, and Retrofit Design, 137
Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. II: Fragility Analysis, Fragility Curves, and Fragility Surfaces, 138

Bridges, long span

Aerostatic Reliability Analysis of Long-Span Bridges, 119
Dynamic Performance Simulation of Long-Span Bridge under Combined Loads of Stochastic Traffic and Wind, 115
Investigation of Turbulence Effects on Torsional Divergence of Long-Span Bridges by Using Dynamic Finite-Element Method, 155
Operational Requirements for Long-Span Bridges under Strong Wind Events, 107
Performance Test of Energy Dissipation Bearing and Its Application in Seismic Control of a Long-Span Bridge, 153

Bridges, pedestrian

The Art of Science, 2172
Combined Experimental-Operational Modal Testing of Footbridges, 527
Modeling Spatially Unrestricted Pedestrian Traffic on Footbridges, 1735
Path To Safety, 2163

Bridges, railroad

Bridge Inspection Practice: Two Different North American Railways, 136
Ironclad, 2204
Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Bridges, spans

Parametric Study of Posttensioned Inverted-T Bridge System for Improved Durability and Increased Span-to-Depth Ratio, 164
The Story of World Record Spans, 2171
Worth the Wait, 2213

Bridges, steel

Box-and-Ellipse-Based ANFIS for Bridge Coating Assessment, 297
Design and Costs for Simple-Made-Continuous Rolled Steel Girder Bridges: Literature Survey, 2153
Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97
Influence of Surface Condition on the Inspection of Steel Bridge Elements Using the Time-of-Flight Diffraction Method, 157
Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129
Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759
Rapid Girder Selection and Cost Estimation for Simple-Made-Continuous Steel Bridge Design, 2158
Rapid Ranking Procedures for Gusset Plate Connections in Existing Steel Truss Bridges, 149
Rotation Compatibility Approach to Moment Redistribution for Design and Rating of Steel I-Girder Bridges, 99
Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. I: Bridge Modeling, Parametric Analysis, and Retrofit Design, 137
Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. II: Fragility Analysis, Fragility Curves, and Fragility Surfaces, 138
Steel Girder Stability during Bridge Erection: AASHTO LRFD Check on L/b Ratios, 167
Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Bridges, suspension

Effect of Hanger Flexibility on Dynamic Response of Suspension Bridges, 602
History of the Modern Suspension Bridge, 2255
Joseph B. Strauss, Charles A. Ellis, and the Golden Gate Bridge: Justice at Last, 1589
Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759
A New Approach, 2165

Bridges, viaduct

Dynamic Analysis of a Composite Cable-Stayed Bridge: Escaleritas Viaduct, 156

Bridges, wood

Design and Construction of Modern Bamboo Bridges, 145

Brittle failures

Reducing Brittle and Fatigue Failures in Steel Structures, 2274

Bubbles

Effects of Bubble Size and Diffusing Area on Destratification Efficiency in Bubble Plumes of Two-Layer Stratification, 951

Removal of Trichlorobenzene from Flue Gas Using Complex Absorbent, 767

Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size, 771

Buckling

Bending, Buckling, and Vibration of Micro/Nanobeams by Hybrid Nonlocal Beam Model, 516

Buckling of a Weakened Infinite Beam on an Elastic Foundation, 513

Buckling of Variable Section Columns under Axial Loading, 506

Closed-Form Solutions for Buckling of Long Anisotropic Plates with Various Boundary Conditions under Axial Compression, 569

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Experimental Investigations, 1643

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Design, 1644

Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701

Distortional Buckling of Cold-Formed Steel Shear Wall Studs under Uplift Force, 1638

Elastic Buckling of Cold-Formed Thin-Walled Channel Beams with Drop Flanges, 1695

Experiments on the Buckling Behavior of Ring-Stiffened Pipelines under Hydrostatic Pressure, 505

First-Order Solutions for the Buckling Loads of Euler-Bernoulli Weakened Columns, 525

Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536

Global Lateral Buckling of I-Shaped Girder Systems, 6

Inelastic Plate Buckling, 571

Load-History Effects on Deformation Capacity of Flexural Members Limited by Bar Buckling, 1606

Local Buckling of Fire-Exposed Aluminum Members: New Design Model, 1612

Local Delamination Buckling of Laminated Composite Beams Using Novel Joint Deformation Models, 514

LRFD Factors for Pultruded Wide-Flange Columns, 1663

Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672

Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740

New Reference Wind Speed for Wind Turbines in Typhoon-Prone Areas in the Philippines, 1654

Nonlinear Finite-Element Analysis for Hysteretic Behavior of Thin-Walled Circular Steel Columns with In-Filled Concrete, 1745

Nonlinear Thermoelastic Buckling of Pin-Ended Shallow Arches under Temperature Gradient, 553

Reliability Analysis of Buried Flexible Pipe-Soil Systems, 1565

Ring-Reinforced Pipelines: That Moment of Mystery, 1568

Simplified Model for Compressive Behavior of Concrete Columns Strengthened by Steel Angles and Strips, 482

Static Stability Formulas of a Weakened Timoshenko Column: Effects of Shear Deformations, 608

Steel Girder Stability during Bridge Erection: AASHTO LRFD Check on L/b Ratios, 167

Study of Buckling in Steel Silos under Eccentric Discharge Flows of Stored Solids, 534

Tests and Analysis of Cantilevered GFRP Tubular Poles with Partial Concrete Filling, 187

Unified Approach to the Characterization of Coupled Composite Laminates: Benchmark Configurations and Special Cases, 64

Unified Element and Section Approach to Design of Cold-Formed Steel Structures, 1642

Budgets

Clearing the Utilities on Time and Under Budget, 2064

Probabilistic Approach for Budgeting in Portfolio of Projects, 350

Buffeting

Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531

Building design

Archetype, 2168

The Burj Khalifa Triumphs: Reaching toward The Heavens, 2170

Dramatic Inclination, 2202

High-Performance Green Building Design Process Modeling and Integrated Use of Visualization Tools, 80

An Honorable Effort, 2221

Transparent Beauty, 2207

Transparent Beauty

Wind Loads, 2294

Building envelope

Automated Code Compliance Checking for Building Envelope Design, 280

Life-Cycle Costs of Commercial Roof Systems, 79

Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722

Buildings

Benchmarking Framework to Measure Extent of ICT Adoption for Building Project Management, 368

Building Information Modeling in Architecture, Engineering, and Construction: Emerging Research Directions and Trends, 1595

Comparative Analysis on the Seismic Behavior of Combined RC-Masonry Buildings, 1752

Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708

Critical Assessment of Interstory Drift Measurements, 1760

Deficiency Analysis of Coastal Buildings toward Storm Damage Reduction, 1508

Discussion of Criteria for Prioritization of Predictive Maintenance of Building Façades: Survey of 30 Experts, 1529

Eave Ice Dams, 77

Experimental Seismic Response of a Full-Scale Light-Frame Wood Building, 1631

Improving the Seismic Performance of Existing Buildings and Other Structures, 2259
Learning from Construction Failures due to the 2009 L'Aquila, Italy, Earthquake, 1550
Measuring Performance for Building Maintenance Providers, 401
Piloting Evaluation Metrics for Sustainable High-Performance Building Project Delivery, 402
Prediction of Life-Cycle Expenditure for Different Categories of Council Buildings, 1551
Principles and Practice of Engineering, 2271
Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761
Variation of Internal Pressure with Varying Sizes of Dominant Openings and Volumes, 1737

Buildings, high-rise

Aerodynamic Damping in the Along-Wind Response of Tall Buildings, 1617
Analysis of Tall Buildings with Damped Outriggers, 1747
Benchmarking Current Conceptual High-Rise Design Processes, 87
The Burj Khalifa Triumphs: Engineering an Idea: The Realization Of the Burj Khalifa, 2169
The Burj Khalifa Triumphs: Reaching toward The Heavens, 2170
Cyclic Behavior of Diagrid Nodes with H-Section Braces, 1717
Effects of a Construction Tower Crane on the Wind Loading of a High-Rise Building, 1749
Empire State Building Project: Archetype of "Mass Construction", 384
Feasibility Study of Rotorcraft Fire Fighting for High-Rise Buildings, 58
Height and Construction Costs of Residential High-Rise Buildings in Shanghai, 430
Probabilistic Seismic Loss Assessment of a Vancouver High-Rise Building, 1630
Seismic Resistance Capacity of High-Rise Buildings Subjected to Long-Period Ground Motions: E-Defense Shaking Table Test, 1670
Tall Building Response Parameters: Sensitivity Study Based on Orthogonal Factorial Experiment Design Technique, 1622

Buildings, low-rise

Analysis of Wind-Induced Clip Loads on Standing Seam Metal Roofs, 1641
Horizontal Wind Loads on Open-Frame, Low-Rise Buildings, 1615
Simplified Method for the Seismic Analysis of Masonry Shear-Wall Buildings, 1659
Tornado-Induced Wind Loads on a Low-Rise Building, 1616
Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681
Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722
Wind-Induced Pressures on Patio Covers, 1723

Buildings, multistory

Dimensional Response Analysis of Multistory Regular Steel MRF Subjected to Pulselike Earthquake Ground Motions, 1698
Estimation of Maximum Roof Displacement Demands in Regular Multistory Buildings, 459
Experimental Seismic Response of a Full-Scale Six-Story Light-Frame Wood Building, 1732
Improved Decentralized Method for Control of Building Structures under Seismic Excitation, 524
In-Plane Experimental Testing of Timber-Concrete Composite Floor Diaphragms, 1750

Buildings, nonresidential

Aligned with Nature, 2220
Assessment of Mortar and Brick Strength in Earthquake-Affected Structures in Peru Using a Schmidt Hammer, 1560
The Disney Story, 2166
An Honorable Effort, 2221
Life-Cycle Assessment Modeling of Construction Processes for Buildings, 1184
Queuing Model for Assessing the Efficiency of Building Corridors, 76

Buildings, residential

Analysis of Residential Framing Accidents, Activities, and Task Demands, 341
Archetype, 2168
Assessing the Environmental Impacts of a Lean Supply System: Case Study of High-Rise Condominium Construction in Korea, 92
CBR Revision Model for Improving Cost Prediction Accuracy in Multifamily Housing Projects, 1338
Critical Concerns of Production Control System on Projects with Labor Constraints: Lessons from a Residential Case Study, 1332
Engineering Perspectives on Reducing Hurricane Damage to Housing in CARICOM Caribbean Islands, 2092
Height and Construction Costs of Residential High-Rise Buildings in Shanghai, 430
Integrating Neurofuzzy System with Conceptual Cost Estimation to Discover Cost-Related Knowledge from Residential Construction Projects, 265
Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420
Slab-on-Grade versus Framed Slab, 94
Wood Materials, Nails, and Sheathing Connections from Early 20th Century Residential Buildings, 1469

Build/Operate/Transfer

First Public-Private-Partnership Application in Taiwan's Wastewater Treatment Sector: Case Study of the Nanzih BOT Wastewater Treatment Project, 406
Hierarchical Structuring of PPP Risks Using Interpretative Structural Modeling, 329

Buried pipes

Application of BGPR Logging: Two Case Studies, 848
Buried Pipeline Response to Braced Excavation Movements, 1518
Clearing the Utilities on Time and Under Budget, 2064
Integrating Global Positioning System with Laser Technology to Capture As-Built Information during Open-Cut Construction, 1580
Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449
Nonlinear Finite-Element-Based Investigation of the Effect of Bedding Thickness on Buried Concrete Pipe, 1873
Recommendations for Design of Reinforced Concrete Pipe, 1564

Reliability Analysis of Buried Flexible Pipe-Soil Systems, 1565

Ring-Reinforced Pipelines: That Moment of Mystery, 1568

Seismic Damage Estimation for Buried Pipelines: Challenges after Three Decades of Progress, 1563

Seismic Design and Analysis of Buried Culverts and Structures, 1575

Seismic Fragility Formulations for Segmented Buried Pipeline Systems Including the Impact of Differential Ground Subsidence, 1579

Tunneling beneath Buried Pipes: View of Soil Strain and Its Effect on Pipeline Behavior, 935

Buried structures

Clearing the Utilities on Time and Under Budget, 2064

Simplified Damage Assessment Method for Buried Structures against External Blast Load, 1667

Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854

Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103

Buses

Bus-to-Depot Allocation: Models and Decision Support System, 1852

Comparative Analysis of Unconditional and Conditional Priority for Use at Isolated Signalized Intersections, 1906

Genetic Algorithm for Bus Frequency Optimization, 1849

Influence of Platform Walking on BRT Station Bus Dwell Time Estimation: Australian Analysis, 1915

Microscopic Traffic Simulation Approach to the Capacity Impact Analysis of Weaving Sections for the Exclusive Bus Lanes on an Urban Expressway, 1885

Microsimulation Study of the Effect of Exclusive Bus Lanes on Heterogeneous Traffic Flow, 1922

Single-Stage Integer Programming Model for Long-Term Transit Fleet Resource Allocation, 1819

Traffic Modeling and College-Bus Routing Using Entropy Maximization, 1800

Business management

Critical Review of Collaborative Working in Construction Projects: Business Environment and Human Behaviors, 1335

Engineering Leadership and Management during Financial Crisis, 2062

Mobilizing Institutional Knowledge for International Projects, 357

Cables

Dynamic Behavior of Stay Cables with Rotational Dampers, 528

Numerical Simulation of Damage Localization in Polyester Mooring Ropes, 552

Optimal Tuning of Amplitude Proportional Coulomb Friction Damper for Maximum Cable Damping, 1618

Stochastic Response of an Inclined Shallow Cable with Linear Viscous Dampers under Stochastic Excitation, 599

Structural Applications of Steel Cables for Buildings, 2283

Wind-Induced Response Characteristics of Monolayer Cable Net, 490

Caissons

3D Surface Modeling and Measuring System for Pneumatic Caisson, 282

Installation and Axial Pullout of Suction Caissons: Numerical Modeling, 886

Slab-on-Grade versus Framed Slab, 94

Calcium

Effects of Calcium Carbide Residue–Fly Ash Binder on Mechanical Properties of Concrete, 1474

Calcium carbonate

Improved Passive Treatment of Acid Mine Drainage in Mushroom Compost Amended with Crab-Shell Chitin, 683

Calibration

Approach Using Active Groundwater Storage for Hydrologic Model Calibration in West-Central Florida, 1205

Calibration and Verification of SHAKER, a Deterministic Toll Plaza Simulation Model, 1798

Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923

Calibration of Reactive Transport Models for Remediation of Mine Drainage in Solid-Substrate Biocolumns, 714

Case Studies of Leak Detection and Location in Water Pipe Systems by Inverse Transient Analysis, 1984

Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988

Development, Calibration, and Verification of a New Mechanistic-Empirical Reflective Cracking Model for HMA Overlay Thickness Design and Analysis, 1827

Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268

Estimation of Lateral Load Capacity of Rigid Short Piles in Sands Using CPT Results, 779

Exact Sensitivity Equation for One-Dimensional Steady-State Shallow Water Flow (Application to Model Calibration), 1150

Image-Based Machine Learning for Reduction of User Fatigue in an Interactive Model Calibration System, 283

Multiobjective Water Quality Model Calibration Using a Hybrid Genetic Algorithm and Neural Network–Based Approach, 724

Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989

Penetration Type Field Velocity Probe for Soft Soils, 792

Propagation of an Unmodeled Additive Constant in Range Sensor Observations, 1779

Relative Comparison of the Local Recalibration of the Temperature-Based Evapotranspiration Equation for the Korea Peninsula, 1266

Sensitivity-Based External Calibration of Multiaxial Loading System, 478

Soil Moisture Measurements: Comparison of Instrumentation Performances, 1208

Space Development Modeling of Urban Regions in Developing Countries, 1925

Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916

Watershed-Scale Impacts of Nitrogen from On-Site Wastewater Systems: Parameter Sensitivity and Model Calibration, 715

California

Artificial Neural Network Model for Cost Estimation: City of Edmonton's Water and Sewer Installation Services, 388

Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051

Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185

Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309

Construction Risks: Single versus Portfolio Insurance, 1317

The Disney Story, 2166

Disposal of Arsenic-Laden Adsorptive Media: Economic Analysis for California, 730

Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629

Evaluation of the Biocriteria of Streams in the San Diego Hydrologic Region, 684

Expert System Approach for Soil Structure Interaction and Land Use, 1931

Impact of Different Earthquake Types on the Statistics of Ductility Demand, 1684

Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086

Joseph B. Strauss, Charles A. Ellis, and the Golden Gate Bridge: Justice at Last, 1589

Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989

Path To Safety, 2163

A Solid Foundation, 2209

Stability Analysis of Bay Bridge Saddle Configuration, 1764

Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232

Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Cameras

Benefits and Barriers of Construction Project Monitoring Using High-Resolution Automated Cameras, 377

Modern Determination of Vertical Deflections Using Digital Zenith Cameras, 1766

Canada

Automated Detection and Location of Leaks in Water Mains Using Infrared Photography, 1519

Characterizing Physicochemical Quality of Storm-Water Runoff from an Urban Area in Calgary, Alberta, 745

Developing and Teaching a Course in "Applied Sustainability and Public Health in Civil Engineering Design" at Queen's University, Kingston, Canada, 1601

Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997

Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Free and Secure Trade Commercial Vehicle Crossing Times at the Pacific Highway Port of Entry, 1889

Fuzzy Nonlinear Regression Approach to Stage-Discharge Analyses: Case Study, 1060

Impacts and Uncertainty of Climate Change on Water Resource Management of the Peribonka River System (Canada), 1997

Lessons Learned from a Design Competition for Structural Engineering Students: The Case of a Pedestrian Walkway at the Université de Sherbrooke, 1587

Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510

Modification of the Lake Flow Algorithm of the Distributed Hydrological Model HYDROTEL When Modeling Lakes with Multiple Outlets, 1151

Operational Requirements for Long-Span Bridges under Strong Wind Events, 107

Permafrost Weakening as a Potential Impact of Climatic Warming, 168

Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905

Primary Schools' Territorial Policy and Active Commuting: Institutional Influences in Montreal and Trois-Rivières, 1948

Probabilistic Seismic Loss Assessment of a Vancouver High-Rise Building, 1630

Roadway Reinvention, 2197

Sensitivity of Field Data Estimates in One-Dimensional Hydraulic Modeling of Channels, 983

Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704

Transferability of Community-Based Collision Prediction Models for Use in Road Safety Planning Applications, 1882

Water Use Intensities and the Composition of Production in Canada, 1965

Why Cost and Schedule Overruns on Mega Oil Sands Projects?, 2132

Canals

Aggradation of Irrigation Canal Network in Žitný Ostrov, Southern Slovakia, 1247

Application of Software for Automatic Canal Management (SacMan) to the WM Lateral Canal, 1249

Canal Seepage Reduction by Soil Compaction, 1252

Closed-Form Expression of the Response Time of an Open Channel, 1274

Design of a Single-Pool Downstream Controller Using Quantitative Feedback Control Theory, 1275

Downstream-Water-Level Control Test Results on the WM Lateral Canal, 1250

Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268

High-Resolution Method for Modeling Hydraulic Regime Changes at Canal Gate Structures, 1287

Modeling Controlled Water Systems, 1244

Modeling the Effect of Flow Structure Selection on Residence Time in an Artificial Canal System: Case Study, 2037

Real-Time Implementation of Model Predictive Control on Maricopa-Stanfield Irrigation and Drainage District's WM Canal, 1281

Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251

Supervised Gain-Scheduling Multimodel versus Linear Parameter Varying Internal Model Control of Open-Channel Systems for Large Operating Conditions, 1260

Supervision and Water Depth Automatic Control of an Irrigation Canal, 1199

Cantilevers

Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716

Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536

Capital improvement

Public versus Private Perceptions on Hiring an External Program Manager, 336

Carbon

Development of a Novel Internal Electrolysis System by Iron Connected with Carbon: Treatment of Nitroaromatic Compounds and Case of Engineering Application, 719

Effect of Carbon Source on Biological Nitrogen and Phosphorus Removal in an Anaerobic-Anoxic-Oxic (A^2O) Process, 749

Flexural Behavior of Continuous FRP-Reinforced Concrete Beams, 243

Hydraulic Test of a Bioretention Media Carbon Amendment, 1109

Carbon dioxide

Carbonation Curing of Slag-Cement Concrete for Binding CO_2 and Improving Performance, 1373

Life-Cycle Assessment of Waste Management Greenhouse Gas Emissions Using Municipal Waste Combustor Data, 697

Single-Objective versus Multiobjective Optimization of Water Distribution Systems Accounting for Greenhouse Gas Emissions by Carbon Pricing, 2015

Carbonation

Carbonation Curing of Slag-Cement Concrete for Binding CO_2 and Improving Performance, 1373

Proposed Behavioral Model for Deicer Scaling Resistance of Slag Cement Concrete, 1380

Strength and Carbonation Model of Rice Husk Ash Cement Mortar with Different Fineness, 1368

Caribbean

Engineering Perspectives on Reducing Hurricane Damage to Housing in CARICOM Caribbean Islands, 2092

Case studies

Application of BGPR Logging: Two Case Studies, 848

Assessing the Environmental Impacts of a Lean Supply System: Case Study of High-Rise Condominium Construction in Korea, 92

Assessment of Policies toward an Environmentally Friendly Urban Transport System: Case Study of Delhi, India, 1926

Assessment of the Electromagnetic Disturbance of a Glass Fiber Reinforced Composite Fencing Structure, 239

Case Study of Distributed Hydrologic Model for Soil and Nutrient Loss Estimation in Small Watershed, 2102

Case Study on the Evaluation of Equipment Flow at a Construction Site, 314

Causes, Effects, Benefits, and Remedies of Change Orders on Public Construction Projects in Oman, 375

Climate Change Impact Assessment Using K-Nearest Neighbor Weather Generator: Case Study of the Nakdong River Basin in Korea, 1133

Consistency and Reliability of Construction Arbitration Decisions: Empirical Study, 1323

Detection of Terrain Morphologic Features Using GPS, TLS, and Land Surveys: "Tana della Volpe" Blind Valley Case Study, 1782

Determinants of Industry Acceptance for Highway Warranty Contracts: Alabama Case Study, 1172

Dynamic Compaction of Collapsible Soils Based on U.S. Case Histories, 890

Ecological Corridor in the Urban Area: Case Study in Kaohsiung City, Taiwan, 2103

Effects of Urbanization on Groundwater, 2239

Electrical Transmission and Substation Structures 2009, 2240

Evaluation and Adaptation of the EGM2008 Geopotential Model along the Northern Nile Valley, Egypt: Case Study, 1770

Evaluation of Flow Liquefaction and Liquefied Strength Using the Cone Penetration Test, 856

Exploring Best-Fit Hazard Functions and Lifetime Regression Models for Urban Weekend Activities: Case Study, 1817

Explosion Phenomena and Effects of Explosions on Structures. III: Methods of Analysis (Explosion Damage to Structures) and Example Cases, 2145

Factors Affecting Construction Project Outcomes: Case Study of Vietnam, 1596

Field Tests on Pile-Supported Embankments over Soft Ground, 850

Findings of Case Histories on the Long-Term Performance of Seepage Barriers in Dams, 775

Ground Movements around Corners of Excavations: Empirical Calculation Method, 911

Improved Method to Calculate a Water Poverty Index at Local Scale, 754

Improving HSPF Modeling Accuracy from FTABLES: Case Study for the Illinois River Basin, 1119

In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study, 150

Integrated Project Delivery Case Study: Guidelines for Drafting Partnering Contract, 1316

Integrated Simulation System for Construction Operation and Project Scheduling, 313

Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525

Long-Term Operation of Irrigation Dams Considering Variable Demands: Case Study of Zayandeh-rud Reservoir, Iran, 1234

Modeling the Effect of Flow Structure Selection on Residence Time in an Artificial Canal System: Case Study, 2037

Numerical Age and Residence-Time Mapping for a Small Tidal Creek: Case Study, 2049

Opportunities for Efficient and Environmentally Friendly Energy Systems: BMC Case Study in Lobatse, Botswana, 453

OPUS-RS Pair Points: Case Study, 1777

Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326

Quality Control of Soil Water Data in Applied Climate Information System—Case Study in Nebraska, 1076

Rating Sustainability: Transportation Investments in Urban Corridors as a Case Study, 1937

Rotation- and Translation-Free Estimations of Symmetric, Rank-Two Tensors with a Case Study in LIDAR Surveying, 1768

Scour and Erosion (GSP 210), 2276
Sustainable Electric Power System: Is It Possible? Case Study: Croatia, 458
TMDLs in the Urban Environment, 2288
Understanding and Managing Three-Dimensional/Four-Dimensional Model Implementations at the Project Team Level, 389
Using Fuzzy Logic and Expert System Approaches in Evaluating Flexible Pavement Distress: Case Study, 1805

Cast in place
Durability of Wet Bond of Hybrid Laminates to Cast-in-Place Concrete, 196

Cast iron
Probability of Failure Analysis due to Internal Corrosion in Cast-Iron Pipes, 1170

Catchments
Evaluating Urban Pollutant Buildup/Wash-Off Models Using a Madison, Wisconsin Catchment, 630
Incentive Index Developed to Evaluate Storm-Water Low-Impact Designs, 761
Long-Term Simulation of a System for Catchment, Pretreatment, and Treatment of Polluted Runoff Water, 773
Performance Investigation of Nakagami-m Distribution to Derive Flood Hydrograph by Genetic Algorithm Optimization Approach, 1121
Probabilistic Approach to Estimation of Urban Storm-Water TMDLs: Regulated Catchment, 1270
Theory-Based SCS-CN Method and Its Applications, 1159

Caves
Filling of a Flooded Gypsum Mine with a Flowable Soil-Cement Mix, 1411

Cavitation
Chute Aerators. I: Air Transport Characteristics, 980
Chute Aerators. II: Hydraulic Design, 981

Ceilings
Earthquake Simulator Testing and Seismic Evaluation of Suspended Ceilings, 82

Cement
Capillary Shape: Influence on Water Transport within Unsaturated Alkali Activated Slag Concrete, 1369
Carbon Neutral Off-White Rice Husk Ash as a Partial White Cement Replacement, 1464
Carbonation Curing of Slag-Cement Concrete for Binding CO_2 and Improving Performance, 1373
Comparative Performance of the SMAC Made with the SBS- and ST-Modified Binders, 1406
Contaminant Leaching from Stabilized/Solidified Acid Tars, 764
Effects of Bulk Water Chemistry on Autogenous Healing of Concrete, 1398
Effects of Water-Binder Ratio and Fine Aggregate–Total Aggregate Ratio on the Properties of Hwangtoh-Based Alkali-Activated Concrete, 1443
High-Pressure Isotropic Compression Tests on Fiber-Reinforced Cemented Sand, 861
Influence of Fly Ash on Unconfined Compressive Strength of Cement-Admixed Clay at High Water Content, 1345
Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages, 1371
Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829
Laboratory Evaluation of Moisture Susceptibility of Hot-Mix Asphalt Containing Cementitious Fillers, 1416
Optimization of Cement Grouts Containing Silica Fume and Viscosity Modifying Admixture, 1377
Proportioning Design and Mechanical Properties Research of Polypropylene Fiber and Polymer Emulsion Reinforced Cement Mortar, 1364
Quality Assessment and Quality Control of Deep Soil Mixing Construction for Stabilizing Expansive Subsoils, 785
Simple Three-Step Analytical Scheme for Prediction of Elastic Moduli of Hardened Cement Paste, 1478
Strength and Carbonation Model of Rice Husk Ash Cement Mortar with Different Fineness, 1368
Study on Strain-Rate Sensitivity of Cementitious Composites, 566
Ultrafine Cement in Pressure Grouting, 2292

Centrifuge
Centrifuge Permeameter for Unsaturated Soils. I: Theoretical Basis and Experimental Developments, 878
Centrifuge Permeameter for Unsaturated Soils. II: Measurement of the Hydraulic Characteristics of an Unsaturated Clay, 879
Centrifuge Testing to Evaluate and Mitigate Liquefaction-Induced Building Settlement Mechanisms, 864
CPT-Based Evaluation of Liquefaction and Lateral Spreading in Centrifuge, 904
Mechanisms of Seismically Induced Settlement of Buildings with Shallow Foundations on Liquefiable Soil, 788
Tunneling beneath Buried Pipes: View of Soil Strain and Its Effect on Pipeline Behavior, 935

Centrifuge models
Nonlinear Cone Penetration Test-Based Method for Predicting Footing Settlements on Sand, 813
Seismic Earth Pressures on Cantilever Retaining Structures, 903
Sensitivity of Shallow Foundation Response to Model Input Parameters, 827
Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789
Weighted Residual Numerical Differentiation Algorithm Applied to Experimental Bending Moment Data, 857

Ceramics
Bench-Scale Evaluation of Chemically Bonded Phosphate Ceramic Technology to Stabilize Mercury Waste Mixtures, 639
Inspection and Repair of Ceramic Tiling within a Building Management System, 1344
Mechanism behind the Size Effect Phenomenon, 465
Recycled Red-Clay Ceramic Construction and Demolition Waste for Mortars Production, 1366

Certification
Impact of the Leadership in Energy and Environmental Design Accredited Professional Credential on Design Professionals, 1594

Change management
Clearing the Utilities on Time and Under Budget, 2064
Exploring the Potential of SME Alliances in the Construction Sector, 370
Prediction System for Change Management in Construction Project, 380

Change orders
Causes, Effects, Benefits, and Remedies of Change Orders on Public Construction Projects in Oman, 375
Frequency of Change Orders in Highway Construction Using Alternate Count-Data Modeling Methods, 403
Hybrid Model Incorporating Real Options with Process Centric and System Dynamics Modeling to Assess Value of Investments in Alternative Dispute Resolution Techniques, 300
Model for Quantifying the Impact of Change Orders on Project Cost for U.S. Roadwork Construction, 415
Study of Real Options with Exogenous Competitive Entry to Analyze Dispute Resolution Ladder Investments in Architecture, Engineering, and Construction Projects, 352

Channel flow
Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051
Physically Realistic Roughness Closure Scheme to Simulate Turbulent Channel Flow over Rough Beds within the Framework of LES, 1026

Channels
Analytical Model of Surge Flow in Nonprismatic Permeable Channels and Its Application in Arid Regions, 972
Anomalous Contraction Scour? Vertical-Contraction Case, 955
Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051
Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries, 1067
Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997
Hydraulic Geometry Relations for Stable Channel Design, 1142
Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136
One-Dimensional Study on Propagation of Tsunami Wave in River Channels, 950
Overtopping Probability Constrained Optimal Design of Composite Channels Using Swarm Intelligence Technique, 1259
Sensitivity of Field Data Estimates in One-Dimensional Hydraulic Modeling of Channels, 983
Stability of Stones under Uniform Flow, 954

Chemical treatment
Evaluation of UV LEDs Performance in Photochemical Oxidation of Phenol in the Presence of H_2O_2, 640
Performance of North American Bioreactor Landfills. II: Chemical and Biological Characteristics, 707

Chemicals
Aluminum Reactions and Problems in Municipal Solid Waste Landfills, 2126
Apparatus for Testing the Combined Effects of Deformation and Chemical Exposure on Polymeric Liners, 1365
Decolorization and Mineralization of Remazol Red F3B by Fenton and Photo-Fenton Processes, 722
Evaluation of Surface Water Runoff from Fly Ash–Stabilized and Nonstabilized Soil Surfaces, 716
Investigation of Laboratory Procedure for Evaluating Chemical Dust Palliative Performance, 1472
Mathematical Model for the Sequestering of Chemical Contaminants by Magnetic Particles, 750
SCIA: GIS-Based Software for Assessing the Impacts from Chemical Industrial Accidents, 2106

Chesapeake Bay
Comparison of Spatial Interpolation Methods for Water Quality Evaluation in the Chesapeake Bay, 627

Chile
Proposal of an Integrated Index for Prioritization of Bridge Maintenance, 126

Chimneys
Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235

China
Assessing the Impact of Land Use/Land Cover on Urban Heat Island Pattern in Nanjing City, China, 1957
Chinese Values and Stressors of Construction Professionals in Hong Kong, 442
Comparison of Contract General Conditions between United States and China, 89
Critical Success Factors for PPPs in Infrastructure Developments: Chinese Perspective, 363
Developing a Fuzzy Risk Allocation Model for PPP Projects in China, 404
Development of Soil and Water Assessment Tool Model on Human Water Use and Application in the Area of High Human Activities, Tianjin, China, 1201
Discharge Capacity of Labyrinth Side Weir Located on a Straight Channel, 1203
Distribution and Trends in Reference Evapotranspiration in the North China Plain, 1226
Draining the Tangjiashan Barrier Lake, 1037
Dynamic Numerical Analysis of Antimoisture-Damage Mechanism of Permeable Pavement Base, 36
Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517
Height and Construction Costs of Residential High-Rise Buildings in Shanghai, 430
ICCTP 2010, 2257
Influence of Vertical Resolution and Nonequilibrium Model on Three-Dimensional Calculations of Flow and Sediment Transport, 953
Integrating Neurofuzzy System with Conceptual Cost Estimation to Discover Cost-Related Knowledge from Residential Construction Projects, 265
Investigating the Impacts of Green Signal Countdown Devices: Empirical Approach and Case Study in China, 1901
Laboratory Test and Numerical Simulation of Time-Dependent Thermomechanical Behavior of the Three-Gorges Dam, 1352
Land Subsidence Disaster Survey and Its Economic Loss Assessment in Tianjin, China, 2081

Measuring Transfer Efficiency of Urban Public Transportation Terminals by Data Envelopment Analysis, 1951

Modeling Destination Choice Behavior Incorporating Spatial Factors, Individual Sociodemographics, and Travel Mode, 1874

Numerical Simulation of Viscoelastoplastic Land Subsidence due to Groundwater Overdrafting in Shanghai, China, 1079

Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326

Personal Construct-Based Factors Affecting Interpersonal Trust in a Project Design Team, 337

Potential Obstacles to Successful Implementation of Public-Private Partnerships in Beijing and the Hong Kong Special Administrative Region, 1320

Precise Control Survey for Erecting the Steel Pylons of the Third Nanjing Yangtze River Bridge, China: Case Study, 1769

Quantitative Delimitation of Metropolitan Areas Based on a Synthetic Method: Case Study in the Lanzhou Metropolitan Area, 1956

Regional Frequency Analysis of Low Flow Based on L Moments: Case Study in Karst Area, Southwest China, 1093

Research on a Short-Range Prediction Model for Track Irregularity over Small Track Lengths, 1905

Spatial Decision Support System for Urban Planning: Case Study of Harbin City in China, 1933

Thermal Interaction between Permafrost and the Qinghai-Tibet Railway, 175

Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176

Traffic and Transportation Studies 2010, 2289

Travel Demand Model for Beijing 2008 Olympic Games, 1845

Urban Land-Use Zoning Based on Ecological Evaluation for Large Conurbations in Less Developed Regions: Case Study in Foshan, China, 1929

Valuation of Flood Reductions in the Yellow River Basin under Land Use Change, 1969

Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871

Chloride

Effects of Bulk Water Chemistry on Autogenous Healing of Concrete, 1398

Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746

Long-Term Capacity of Plant Mulch to Remediate Trichloroethylene in Groundwater, 727

Selection of Durable Closure Pour Materials for Accelerated Bridge Construction, 160

Service Life Prediction for Concrete Structures by Time-Depth Dependent Chloride Diffusion Coefficient, 1477

Understanding the Mixing Pattern in an Anaerobic Expanded Granular Sludge Bed Reactor: Effect of Liquid Recirculation, 678

Chlorine

Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988

Microwave-Enhanced Thermal Desorption of Polyhalogenated Biphenyls from Contaminated Soil, 643

Chromium

Chromium (III) Immobilization and Its Influence on C_3S Hydration, 2124

Importance of Mineralogy in the Geoenvironmental Characterization and Treatment of Chromite Ore Processing Residue, 823

Civil engineering

Education for Sustainable Development and Civil Engineering for Children: Interactive Model Case Study, 1598

Graduate Education in Construction Management, 1599

Civil engineering landmarks

The Burj Khalifa Triumphs: Reaching toward The Heavens, 2170

Capitol Connections, 2189

Celebrating Hoover Dam: In Appreciation of a Civil Engineering Icon, 2215

Celebrating Hoover Dam: Mission of Boulder Dam Fulfilled, 2218

Celebrating Hoover Dam: Significance of Boulder Canyon Project, 2217

Celebrating Hoover Dam: The Majesty of Hoover Dam, 2216

Charles Macdonald, 148

History of the Modern Suspension Bridge, 2255

Hoover Dam, 2256

Joseph B. Strauss, Charles A. Ellis, and the Golden Gate Bridge: Justice at Last, 1589

The Story of World Record Spans, 2171

Cladding

Inspection and Repair of Ceramic Tiling within a Building Management System, 1344

Lateral Seismic Performance of Multipanel Precast Hollowcore Walls, 1686

Claims

Case Law and Variations in Cumulative Impact Productivity Claims, 397

Analysis of Adverse Weather for Excusable Delays, 439

Case for Expanding the Claim Dispute Resolution Training of TxDOT Personnel, 1314

Hybrid Model Incorporating Real Options with Process Centric and System Dynamics Modeling to Assess Value of Investments in Alternative Dispute Resolution Techniques, 300

Investigation on Particular Contractual Issues in Construction, 1312

Model for Quantifying the Impact of Change Orders on Project Cost for U.S. Roadwork Construction, 415

Multiagent System for Construction Dispute Resolution (MAS-COR), 345

Quantification of Losses of Labor Efficiencies: Innovations in and Improvements to the Measured Mile, 1302

Study of Real Options with Exogenous Competitive Entry to Analyze Dispute Resolution Ladder Investments in Architecture, Engineering, and Construction Projects, 352

Classification

Automated Generation of Customized Field Data Collection Templates to Support Information Needs of Cost Estimators, 274

Design Error Classification, Causation, and Prevention in Construction Engineering, 1536

Design Robustness of Local Water-Recycling Schemes, 2012

Groundwater Classification Using Multivariate Statistical Methods: Birimian Basin, Ghana, 765

Clay liners

Consolidation of a Geosynthetic Clay Liner under Isotropic States of Stress, 798

Membrane Behavior of Compacted Clay Liners, 907

Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Thickness and Hydraulic Performance of Geosynthetic Clay Liners Overlying a Geonet, 828

Clays

Analysis of Soil Disturbance Associated with Mandrel-Driven Prefabricated Vertical Drains Using an Elliptical Cavity Expansion Theory, 17

Analysis of Soil Strength Degradation during Episodes of Cyclic Loading, Illustrated by the T-Bar Penetration Test, 23

Application of Natural Clayey Soil as Adsorbent for the Removal of Copper from Wastewater, 769

Centrifuge Permeameter for Unsaturated Soils. II: Measurement of the Hydraulic Characteristics of an Unsaturated Clay, 879

Characterization of Organic Surfactant on Montmorillonite Nanoclay to Be Used in Bitumen, 1431

Class A Prediction of the Behavior of Soft Estuarine Soil Foundation Stabilized by Short Vertical Drains beneath a Rail Track, 841

Consolidation Behavior of Soils Subjected to Asymmetric Initial Excess Pore Pressure Distributions, 31

Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997

Effect of Sand Columns on the Undrained Load Response of Soft Clays, 898

Effective Porosity Measurement of a Marine Clay, 689

Embankments over Soft Clay Deposits: Contribution of Basal Reinforcement and Surface Sand Layer to Stability, 799

Evaluation of Surface Water Runoff from Fly Ash–Stabilized and Nonstabilized Soil Surfaces, 716

Group Interaction Effects on Laterally Loaded Piles in Clay, 830

Influence of Fly Ash on Unconfined Compressive Strength of Cement-Admixed Clay at High Water Content, 1345

Influence of Osmotic Suction on the Soil-Water Characteristic Curves of Compacted Expansive Clay, 938

Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913

In-Plane Behavior of Clay Masonry Walls: Experimental Testing and Finite-Element Modeling, 1742

Measuring and Modeling Proportion-Dependent Stress-Strain Behavior of EPS-Sand Mixture, 34

Numerical Study of the Effect of Verification Core Hole on the Point Bearing Capacity of Drilled Shafts, 900

Percolation Threshold of Sand-Clay Binary Mixtures, 804

Physical Modeling of Lateral Clay-Pipe Interaction, 867

Potential for Clay Clogging of Pervious Concrete under Extreme Conditions, 1063

Reduction Factor for the Unloading Point Method at Clay Soil Sites, 837

Relationship between Texas Cone Penetrometer Tests and Axial Resistances of Drilled Shafts Socketed in Clay Shale and Limestone, 888

Shear Strength in Preexisting Landslides, 868

Simple Yield Surface Expressions Appropriate for Soil Plasticity, 29

Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

State Boundary Surfaces for an Aged Compacted Clay, 897

Strength Measurement for Near-Seabed Surface Soft Soil Using Manually Operated Miniature Full-Flow Penetrometer, 925

Stress-Strain Responses of Block Samples of Compressible Chicago Glacial Clays, 790

Studies on the Behavior of Single and Group of Geosynthetic Encased Stone Columns, 786

Theoretical p-y Curves for Laterally Loaded Single Piles in Undrained Clay Using Bezier Curves, 800

Three-Dimensional Large Deformation Finite-Element Analysis of Plate Anchors in Uniform Clay, 808

Undrained Lateral Pile Response in Sloping Ground, 918

Use of Lightweight ECS as a Fill Material to Control Approach Embankment Settlements, 1409

Using Fly Ash, Clay, and Fibers for Simultaneous Improvement of Concrete Green Strength and Consolidatability for Slip-Form Pavement, 1361

Clean Water Act

Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309

Climate change

Basin-Scale Water Resources Assessment in Oklahoma under Synthetic Climate Change Scenarios Using a Fully Distributed Hydrologic Model, 1068

Climate Change Impact Assessment Using K-Nearest Neighbor Weather Generator: Case Study of the Nakdong River Basin in Korea, 1133

Considering Carbon Capture and Storage for Energy Generation from Municipal Solid Waste, 698

Design Criteria of Urban Drainage Infrastructures under Climate Change, 1979

Design Robustness of Local Water-Recycling Schemes, 2012

Distribution and Trends in Reference Evapotranspiration in the North China Plain, 1226

Drought Analysis Using Trivariate Copulas Conditional on Climatic States, 1070

Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975

Frequency Analysis Incorporating a Decision Support System for Hydroclimatic Variables, 1143

Impacts and Uncertainty of Climate Change on Water Resource Management of the Peribonka River System (Canada), 1997

Inexact Community-Scale Energy Systems Planning Model, 1939

Infilling Missing Daily Evapotranspiration Data Using Neural Networks, 1235

Irrigation Distribution Networks' Vulnerability to Climate Change, 1253

OCCASION: New Planning Tool for Optimal Climate Change Adaption Strategies in Irrigation, 1290
Permafrost Weakening as a Potential Impact of Climatic Warming, 168
Project Management and Green Buildings: Lessons from the Rating Systems, 1588
Watershed Management 2010, 2293
World Environmental and Water Resources Congress 2010, 2296

Climates
Adaptive Climate Response Cost Models for Infrastructure, 1181
Air Temperature Distribution and the Influence of Sky View Factor in a Green Singapore Estate, 1946
Climate Links and Variability of Extreme Sea-Level Events at Key West, Pensacola, and Mayport, Florida, 2061
Comparative Study of SVMs and ANNs in Aquifer Water Level Prediction, 299
Long-Lead Water Supply Forecast Using Large-Scale Climate Predictors and Independent Component Analysis, 1131
Low Flow Scaling with Respect to Drainage Area and Precipitation in Northern Iran, 1077
Nondeformability of Ventilated and Mortar-Embedded Marble Facade Panels, 1496

Clogging
Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665
Effect of Rejuvenation Methods on the Infiltration Rates of Pervious Concrete Pavements, 1098
Permeability Reduction in Pervious Concretes due to Clogging: Experiments and Modeling, 1424
Potential for Clay Clogging of Pervious Concrete under Extreme Conditions, 1063

Closed form solutions
Buckling of Variable Section Columns under Axial Loading, 506
Closed-Form Expression of the Response Time of an Open Channel, 1274
Closed-Form Solution of Axisymmetric Slender Elastic Toroidal Shells, 586
Closed-Form Solutions for Buckling of Long Anisotropic Plates with Various Boundary Conditions under Axial Compression, 569
Nonlinear Thermoelastic Buckling of Pin-Ended Shallow Arches under Temperature Gradient, 553
Practical Formulas for Frequency Domain Analysis of Earthquake-Induced Dam-Reservoir Interaction, 470

Coagulation
Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746
Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614
Industrial Plant for Olive Mill Wastewater from Two-Phase Treatment by Chemical Oxidation, 757
Kinetics of SO_2 Absorption with Fly Ash Slurry with Concomitant Production of a Useful Wastewater Coagulant, 645
Natural Organic Matter Removal by Adsorption onto Carbonaceous Nanoparticles and Coagulation, 729
Treatment of Drilling Wastewater by Combined Coagulation-Ultraviolet/Fenton-Pressurized Biological Processes, 641

Coal
Accumulative Sliding Construction Method for Large-Span Latticed Shells, 428
Electron Beam Irradiation for Mercury Oxidation and Mercury Emissions Control, 675
Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes, 1389

Coal mining
Feasibility of Using Coal Fly Ash for Mine Waste Containment, 690

Coarse-grained soils
Contact Erosion at the Interface between Granular Coarse Soil and Various Base Soils under Tangential Flow Condition, 846
Microporosity Structure of Coarse Granular Soils, 912

Coastal engineering
Hurricane Response of Nearshore Borrow Pits from Airborne Bathymetric Lidar, 2033

Coastal environment
Deficiency Analysis of Coastal Buildings toward Storm Damage Reduction, 1508
Estuarine and Coastal Modeling, 2241
Flood Modeling in the Coastal Plains and Mountains: Analysis of Terrain Resolution, 2079
Reliability Assessment for Operational Wave Forecasting System in Prince William Sound, Alaska, 2060
Scour and Erosion (GSP 210), 2276
Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

Coastal management
Ports 2010, 2270

Coastal processes
Climate Links and Variability of Extreme Sea-Level Events at Key West, Pensacola, and Mayport, Florida, 2061
Influence of Physical Forcing on Bottom-Water Dissolved Oxygen within Caloosahatchee River Estuary, Florida, 725

Coastal structures
Building Damage due to Riverine and Coastal Floods, 1992
Detrimental Effects on Coastal Concrete Structures by *Chaetomorpha Antennina*, 1440
Direct Joint Probability Method for Estimating Extreme Sea Levels, 2035
Time-Dependent Risk Assessment of Combined Overtopping and Structural Failure for Reinforced Concrete Coastal Structures, 2038
Working of Defense Coastal Structures Dissipating by Macroroughness, 2036

Coating
Box-and-Ellipse-Based ANFIS for Bridge Coating Assessment, 297
Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668
Effects of Coarse Aggregate Coatings on Concrete Performance, 1350
Quantification of the Environmental Benefits of Ultrafine/Nanotitanium Dioxide Photocatalyst Coatings for Concrete Pavement Using Hybrid Life-Cycle Assessment, 1179
Series Solution of Wire Coating Analysis Involving MHD Johnson-Segalman Fluid, 47

Coefficients

Can Soil Arching Be Insensitive to ϕ?, 24

Discharge Coefficient for a Water Flow through a Bottom Orifice of a Conical Hopper, 1264

Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691

Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268

Energy Losses in Cross Junctions, 946

Estimation of Maximum Roof Displacement Demands in Regular Multistory Buildings, 459

Evaluation of the Effect of Pavement Roughness on Skid Resistance, 1857

Exact Sensitivity Equation for One-Dimensional Steady-State Shallow Water Flow (Application to Model Calibration), 1150

Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials, 1407

Flow over Gabion Weirs, 1265

Horizontal Dispersion in Gyres-Internal Wave Flow Field in a Rotating Circular Lake, 1115

Hydraulic and Sedimentological Characterizations of a Reach on the Anaktuvuk River, Alaska, 1040

Hydraulic Relations for Clinging Flow of Sharp-Crested Weir, 984

Hydrodynamic Performance of Single- and Double-Wave Screens, 2034

In Situ Microscale Analyses of Activated Sludge Flocs in the Enhanced Biological Phosphate Removal Process by the Use of Microelectrodes and Fluorescent In Situ Hybridization, 676

Incorporation of Air Emissions in Dredging Method Selection, 2046

Investigation of Flow through Orifices in Riser Pipes, 1238

Modeling the Relationship between Capillary Suction Time and Specific Resistance to Filtration, 720

Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844

New Empirical Method for Prediction of Sediment Distribution in Reservoirs, 1137

Seismic Performance Factors for Cold-Formed Steel Special Bolted Moment Frames, 1702

Service Life Prediction for Concrete Structures by Time-Depth Dependent Chloride Diffusion Coefficient, 1477

Variation of Internal Pressure with Varying Sizes of Dominant Openings and Volumes, 1737

Cohesionless soils

Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036

Cohesive soils

Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Cold regions

Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198

Eave Ice Dams, 77

Estimation of Evapotranspiration from Bioretention Areas Using Weighing Lysimeters, 1108

Identifying Critical Sources of Bridge Deterioration in Cold Regions through the Constructed Bridges in North Dakota, 146

Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174

Thermal Interaction between Permafrost and the Qinghai-Tibet Railway, 175

Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176

Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171

Cold-formed steel

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Design, 1644

Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701

Distortional Buckling of Cold-Formed Steel Shear Wall Studs under Uplift Force, 1638

Evaluation of Direct Strength Method for CFS Compression Members without Stiffeners, 1694

Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672

Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718

Seismic Performance Factors for Cold-Formed Steel Special Bolted Moment Frames, 1702

Unified Element and Section Approach to Design of Cold-Formed Steel Structures, 1642

Vibration Performance of Lightweight Cold-Formed Steel Floors, 1671

Collapsible soils

Dynamic Compaction of Collapsible Soils Based on U.S. Case Histories, 890

Color

Biological and Abiotic Color Reduction of Paper Mill Effluents during Anaerobic Composting, 692

Biosorptive Color Removal: Applicability of Equilibrium Isotherm Models, 2098

Decolorization and Mineralization of Remazol Red F3B by Fenton and Photo-Fenton Processes, 722

Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123

Performance Evaluation of No Track Thermoplastic Traffic Markings, 1896

Photocatalytic Degradation of Orange II in Aqueous Iron-Rich Montmorillonite Solutions, 626

Textile Dye Removal in Single-Phase and Two-Phase Anaerobic Biotreatment Systems, 2125

Colorado

Bridge Health Index for the City and County of Denver, Colorado. I: Current Methodology, 1554

Bridge Health Index for the City and County of Denver, Colorado. II: Denver Bridge Health Index, 1555

GeoTrends, 2249

Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086

Rating City and County of Denver Urban Pavement Constructability Using a Profiler, 2133

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

Watershed-Scale Impacts of Nitrogen from On-Site Wastewater Systems: Parameter Sensitivity and Model Calibration, 715

Colorado River

Upper Green River Basin (United States) Streamflow Reconstructions, 1113

Columns

Analytical Model for Circular Normal- and High-Strength Concrete Columns Confined with FRP, 233

Behavior of Large-Scale Rectangular Columns Confined with FRP Composites, 182

Buckling of Variable Section Columns under Axial Loading, 506

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Experimental Investigations, 1643

Experimental Investigation on Square High-Strength Concrete Short Columns Confined with AFRP Sheets, 210

Experimental Study of Normal- and High-Strength Concrete Confined with Fiber-Reinforced Polymers, 232

Externally Reinforced Welded I-Beam-to-Box-Column Seismic Connection, 461

First-Order Solutions for the Buckling Loads of Euler-Bernoulli Weakened Columns, 525

FRP Confinement of Tuff and Clay Brick Columns: Experimental Study and Assessment of Analytical Models, 235

Influence of Bracings on the Stability of Columns, 2154

Investigation on the Impact of Seasonally Frozen Soil on Seismic Response of Bridge Columns, 139

LRFD Factors for Pultruded Wide-Flange Columns, 1663

Modeling Residual Displacements of Concrete Bridge Columns under Earthquake Loads Using Fiber Elements, 117

Nonlinear, Large Deformation Finite-Element Beam/Column Formulation for the Study of the Human Spine: Investigation of the Role of Muscle on Spine Stability, 591

Nonlinear Static Analysis of Structures with Rocking Columns, 1661

Performance of Geosynthetic-Encased Stone Columns in Embankment Construction: Numerical Investigation, 887

Reduced Link Sections for Improving the Ductility of Eccentrically Braced Frame Link-to-Column Connections, 1662

Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238

Seismic Behavior of Reinforced Concrete Exterior Wide Beam-Column Joints, 1608

Seismic Resistance Capacity of High-Rise Buildings Subjected to Long-Period Ground Motions: E-Defense Shaking Table Test, 1670

Stability of Built-Up Timber Beams and Columns: Accounting for Modulus of Elasticity Variability, 2156

Static Stability Formulas of a Weakened Timoshenko Column: Effects of Shear Deformations, 608

Combined sewers

Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717

Optimal Distribution and Control of Storage Tank to Mitigate the Impact of New Developments on Receiving Water Quality, 648

Parsimonious Model for Combined Sewer Overflow Pollution, 646

Preventing Sewer Blowouts during High-Velocity Jet Cleaning Operations, 1191

Urban Storm-Water Quality Management: Centralized versus Source Control, 1986

Combustion

Electron Beam Irradiation for Mercury Oxidation and Mercury Emissions Control, 675

Life-Cycle Assessment of Waste Management Greenhouse Gas Emissions Using Municipal Waste Combustor Data, 697

Communication

Activity Awareness as an Enabler for Communication and Network Building in Construction Design Teams, 301

Assessing the Relevance of Media Synchronicity Theory to the Use of Communication Media in the AECO Industry, 81

Benchmarking Framework to Measure Extent of ICT Adoption for Building Project Management, 368

Characterization of Wireless Smart Sensor Performance, 601

Effective Monitoring of the Concrete Pouring Operation in an RFID-Based Environment, 272

Exploring the Potential of SME Alliances in the Construction Sector, 370

Life-Cycle Management of Construction Projects Based on Virtual Prototyping Technology, 1321

Methodology for Written and Oral Presentation of Research Results, 1593

Organizational Divisions in BIM-Enabled Commercial Construction, 360

Pavement Interactive: Pavement Knowledge Transfer with Web 2.0, 1914

Tsunami Preparedness on the Oregon and Washington Coast: Recommendations for Research, 2085

Community development

Building Capacity through Collaborative Local Action: Case of Matra REGIMA within Zeytinburnu Regeneration Scheme, 1936

Building Community Disaster Preparedness with Volunteers: Community Emergency Response Teams in Illinois, 2090

Inexact Community-Scale Energy Systems Planning Model, 1939

Model of Integrating Humanitarian Development into Engineering Education, 1590

Commute

Impacts of Transportation External Cost Pricing and Transit Fare Reductions on Household Mode/Route Choices and Environmental Improvements, 1954

Primary Schools' Territorial Policy and Active Commuting: Institutional Influences in Montreal and Trois-Rivières, 1948

Compacted soils

Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036

Influence of Gravel on the Compression Characteristics of Decomposed Granite Soil, 926

Investigation of the Thermal Conductivity of Compacted Silts and Its Correlation to the Elastic Modulus, 1386

Membrane Behavior of Compacted Clay Liners, 907

Parameters Controlling Tensile and Compressive Strength of Artificially Cemented Sand, 849

Compaction

Compaction Characteristics and Bearing Ratio of Pond Ash Stabilized with Lime and Phosphogypsum, 1378

Compaction Characteristics of Municipal Solid Waste, 882

Impacts of Construction Activity on Bioretention Performance, 1094

Properties of SCC Produced with Limestone Filler or Viscosity Modifying Admixture, 1379

Using Fly Ash, Clay, and Fibers for Simultaneous Improvement of Concrete Green Strength and Consolidatability for Slip-Form Pavement, 1361

Comparative studies

Comparative Analysis of Compact Multilane Roundabouts and Turbo-Roundabouts, 1823

Comparative Analysis on the Seismic Behavior of Combined RC-Masonry Buildings, 1752

Comparative Performance of the SMAC Made with the SBS- and ST-Modified Binders, 1406

Comparative Study of Acoustic Emission and Scanning Electron Microscope to Evaluate Fracture Process Zone in Concrete Beams, 1473

Comparative Study of Rheological Behavior of Modified Binders for High-Temperature Areas, 1452

Comparative Study of SVMs and ANNs in Aquifer Water Level Prediction, 299

Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm, 330

Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm

Comparison of Contract General Conditions between United States and China, 89

Comparison of Simplified Pan-Based Equations for Estimating Reference Evapotranspiration, 1214

Critical Success Factors for Stakeholder Management: Construction Practitioners' Perspectives, 391

Experimental Research in Construction, 317

FRP Confinement of Tuff and Clay Brick Columns: Experimental Study and Assessment of Analytical Models, 235

Impact of Irrigation Management Transfer on Land and Water Productivity and Water Supply in the Gediz Basin, Turkey, 1233

Interplanar and Intraplanar Differential Settlement Analyses of Boiler Supporting Structure: Comparative Study, 2138

Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes, 1389

New Approach for Predicting Flow Bifurcation at Right-Angled Open-Channel Junction, 1010

Risk Allocation in Public-Private Partnership Infrastructure Projects: Comparative Study, 1198

Soil Moisture Measurements: Comparison of Instrumentation Performances, 1208

Terrestrial Laser Scanning for Monitoring Streambank Retreat: Comparison with Traditional Surveying Techniques, 1023

Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Competition

Contractors' Competition Strategies in Bidding: Hong Kong Study, 420

Lessons Learned from a Design Competition for Structural Engineering Students: The Case of a Pedestrian Walkway at the Université de Sherbrooke, 1587

Tailoring Competitive Advantages Derived from Innovation to the Needs of Construction Firms, 371

Composite beams

Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625

Displacement Method for the Long-Term Analysis of Steel-Concrete Beams with Flexible Connection, 1633

Glued Composite Timber-Concrete Beams. I: Interlayer Connection Specimen Tests, 1729

Glued Composite Timber-Concrete Beams. II: Analysis and Tests of Beam Specimens, 1730

Local Delamination Buckling of Laminated Composite Beams Using Novel Joint Deformation Models, 514

Long-Term Behavior of Composite Beams under Positive and Negative Bending. I: Experimental Study, 1691

Long-Term Behavior of Composite Beams under Positive and Negative Bending. II: Analytical Study, 1692

Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626

Nonlinear Analysis of Composite Beams with Partial Interaction in Steel Frame Structures at Elevated Temperature, 1703

Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. II: Fracture Mechanics Equations, 1483

Unified Flexural Resistance Equations for Stability Design of Steel I-Section Members: Overview, 8

Composite columns

Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188

Effect of Geometric Discontinuities on Strains in FRP-Wrapped Columns, 189

Stress-Strain Behavior of Concrete in Hybrid FRP-Concrete-Steel Double-Skin Tubular Columns, 1646

Composite materials

Analytical Studies of Concrete-Filled Circular Steel Tubes under Axial Compression, 1664

Assessment of the Electromagnetic Disturbance of a Glass Fiber Reinforced Composite Fencing Structure, 239

Behavior of Large-Scale Rectangular Columns Confined with FRP Composites, 182

Composite Flexural Behavior of Full-Scale Concrete-Filled Tubes without Axial Loads, 1744

Development of Fiber-Reinforced Cement-Based Composite Sheets for Structural Retrofit, 1405

Effect of Wrinkles on the Circumferential Strength of a Cast-in-Place Composite Polymer Liner Used in Retrofitting Pressure Pipes, 1492

Elastoplastic Mesoscale Homogenization of Composite Materials, 520

Embedded Cement-Based Piezoelectric Sensors for Acoustic Emission Detection in Concrete, 1494

Experimental Behavior of Carbon Fiber-Reinforced Polymer (CFRP) Sheets Attached to Concrete Surfaces Using CFRP Anchors, 194

Experimental Evaluation of Strength Characteristics of Stabilized Dredged Soil, 1401

Experimental Study and Theoretical Models on Compressive Properties of Ultrahigh Toughness Cementitious Composites, 1463

Extension of the Touratier Kinematic Model to Large Strains, Displacements, and Rotations, 587

Finite-Element Modeling of Short-Term Field Response of Composite Wood-Concrete Floors/Decks, 1677

Flight Mechanics Analysis of a Motorized Trike with Composite Wing, 66

Improvement on SIFCON Performance by Fiber Orientation and High-Volume Mineral Admixtures, 1466

In-Plane Experimental Testing of Timber-Concrete Composite Floor Diaphragms, 1750

In-Plane Stiffness of Semiauxetic Laminates, 576

Interface Shear Connection Analysis of Ultrahigh-Performance Fiber-Reinforced Concrete Composite Girders, 141

Investigation of the Thermal Conductivity of Compacted Silts and Its Correlation to the Elastic Modulus, 1386

Lateral Out-of-Plane Strengthening of Masonry Walls with Composite Materials, 214

Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672

Nonlinear Analysis of Masonry Arches Strengthened with Composite Materials, 557

Numerical Modeling of Concrete-FRP Debonding Using a Crack Band Approach, 178

Optimum Percentage of Fly Ash Reinforcement in Vinyl Ester Composites, 1351

Parameter Identification Procedure for Heterogeneous Viscoelastic Composites Using Iterative Functions, 541

Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410

Progressive Collapse Resistance of Steel-Concrete Composite Floors, 1724

Relaxing the Stud Spacing Limit for Full-Depth Precast Concrete Deck Panels Supported on Steel Girders (Phase I), 140

Reliability-Based Evaluation of Flexural Members Strengthened with Externally Bonded Fiber-Reinforced Polymer Composites, 1721

Retrofitting of Rectangular Columns with Deficient Lap Splices, 179

Seismic Rehabilitation of Corner RC Beam-Column Joints Using CFRP Composites, 244

Simple General Solution for Interfacial Stresses in Plated Beams, 220

Simple Three-Step Analytical Scheme for Prediction of Elastic Moduli of Hardened Cement Paste, 1478

State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181

Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. I: NDS Design Equations, 1482

Structural Performance of Wood Plastic Composite Sheet Piling, 1484

Study of Stress Intensity Factor of a Cracked Steel Plate with a Single-Side CFRP Composite Patching, 254

Study on Strain-Rate Sensitivity of Cementitious Composites, 566

Composite structures

Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509

Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625

Development and Validation of 3D Composite Structural Elements at Elevated Temperatures, 1634

Durability of Wet Bond of Hybrid Laminates to Cast-in-Place Concrete, 196

Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716

Fatigue and Strength Evaluation of Two Glass Fiber-Reinforced Polymer Bridge Decks, 122

Field Monitoring and Repair of a Glass Fiber-Reinforced Polymer Bridge Deck, 1516

Fire Design of Timber-Concrete Composite Slabs with Screwed Connections, 1629

Flutter Control of Smart Composite Structures in Hygrothermal Environment, 73

Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

Mesomechanical Model for Numerical Study of Two-Dimensional Triaxially Braided Composite, 595

Strength and Stiffness of Circular Concrete-Filled Tubes, 1757

Structural Characterization of Composite Structural Insulated Panels for Exterior Wall Applications, 223

Structural Performance of Wood Plastic Composite Sheet Piling, 1484

Thermomechanical Behavior of Multifunctional GFRP Sandwich Structures with Encapsulated Photovoltaic Cells, 224

Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761

Composting

Hydrologic and Water Quality Aspects of Using a Compost/Mulch Blend for Erosion Control, 1272

Integrated Fuzzy Ranking Analysis for Assessing the Quality of Composting Products, 670

Compression

Analytical Studies of Concrete-Filled Circular Steel Tubes under Axial Compression, 1664

Behavior of Concrete in Water Subjected to Dynamic Triaxial Compression, 496

Behavior of Steel Fiber-Reinforced High-Strength Concrete Columns under Uniaxial Compression, 1728

Closed-Form Solutions for Buckling of Long Anisotropic Plates with Various Boundary Conditions under Axial Compression, 569

Compression Performance of Steel Pipelines with Welded Slip Joints, 1561

Directional Effects of Shear Combined with Compression on Bridge Elastomeric Bearings, 101

Effect of Fabric Webs on the Static Response of Spindle-Shaped Tensairity Columns, 1649

Empirical Stress-Strain Model for Unconfined High-Strength Concrete under Uniaxial Compression, 1476

Evaluation of Direct Strength Method for CFS Compression Members without Stiffeners, 1694

High-Pressure Isotropic Compression Tests on Fiber-Reinforced Cemented Sand, 861

Influence of Gravel on the Compression Characteristics of Decomposed Granite Soil, 926

Influence of Water on the Compression Behavior of Decomposed Granite Soil, 842

Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420

Modeling Stress-Dilatancy for Sand under Compression and Extension Loading Conditions, 535

Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

Structural Characterization of Composite Structural Insulated Panels for Exterior Wall Applications, 223

Time-Temperature Superposition for HMA with Growing Damage and Permanent Strain in Confined Tension and Compression, 1387

Truss Modeling of Concrete Columns in Compression, 558

Compression tests

Characterization of Cementitiously Stabilized Granular Materials for Pavement Design Using Unconfined Compression and IDT Testings with Internal Displacement Measurements, 1396

Constitutive Models for Tuff Masonry under Uniaxial Compression, 1467

Discrete Element Modeling of Strength Properties of Johnson Space Center (JSC-1A) Lunar Regolith Simulant, 57

Experimental Evaluation of Strength Characteristics of Stabilized Dredged Soil, 1401

Experimental Study and Theoretical Models on Compressive Properties of Ultrahigh Toughness Cementitious Composites, 1463

Compressive strength

Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188

Comparison of Mechanical Properties for Polymer Concrete with Different Types of Filler, 1419

Compressive Creep of Virgin HDPE Using Equivalent Strain Energy Density Method, 1488

Compressive Strength and Heat Evolution of Concretes Containing Palm Oil Fuel Ash, 1459

Compressive Strength of Self-Compacting Concrete during High-Temperature Exposure, 1455

Effect of Mixing Constituent toward Engineering Properties of POFA Cement-Based Aerated Concrete, 1372

Effect of Severe Environmental Exposures on CFRP Wrapped Concrete Columns, 184

Effect of Wetting on Unconfined Compressive Strength of Cemented Sands, 940

Experimental Study and Theoretical Models on Compressive Properties of Ultrahigh Toughness Cementitious Composites, 1463

Fractal Dimensions of Fracture Surfaces, 476

Fractal Dimensions of Fracture Surfaces

HSC with Expanded Perlite Aggregate at Wet and Dry Curing Conditions, 1486

Influence of Fly Ash on Unconfined Compressive Strength of Cement-Admixed Clay at High Water Content, 1345

Investigating the Effects of Curing Methods on the Compressive Strength of Bitublock, 1362

Investigations on Pastes and Mortars of Ordinary Portland Cement Admixed with Wollastonite and Microsilica, 1374

Modeling Strength of High-Performance Concrete Using an Improved Grammatical Evolution Combined with Macrogenetic Algorithm, 287

Optimization of Cement Grouts Containing Silica Fume and Viscosity Modifying Admixture, 1377

Parameters Controlling Tensile and Compressive Strength of Artificially Cemented Sand, 849

Residual Mechanical Properties of High-Strength Concretes after Exposure to Elevated Temperatures, 1346

Response of Spiral-Reinforced Lightweight Concrete to Short-Term Compression, 1491

Sensitivity of Model Parameter on Dynamic Behavior Simulation of HPC, 1485

Shear Characteristics and Design for High-Strength Self-Consolidating Concrete, 1705

Strength and Carbonation Model of Rice Husk Ash Cement Mortar with Different Fineness, 1368

Strength Deterioration of Plain and Metakaolin Concretes in Aggressive Sulfate Environments, 1385

Variability of the Compressive Strength of Parallel Strand Lumber, 499

Computation

Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312

Calibration and Optimization of the Pumping and Disinfection of a Real Water Supply System, 2008

Comparing Sigmoid Transfer Functions for Neural Network Multistep Ahead Streamflow Forecasting, 1085

Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988

Critical Path Segments Scheduling Technique, 421

Direct Formula to Compute Wave Height and Angle at Incipient Breaking, 2040

Efficacy of Using Support Vector Machine in a Contractor Prequalification Decision Model, 286

Estimation of a Sensitivity-Based Metric for Detecting Market Power, 450

Grid-Enabled Simulation-Optimization Framework for Environmental Characterization, 306

Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136

Modeling the Time Variation of Reservoir Trap Efficiency, 1155

Multiple Flood Source Expected Annual Damage Computations, 1991

Multiscale Curvature Analysis of Asphaltic Aggregate Particles, 308

Optimal Operation of Complex Water Distribution Systems Using Metamodels, 2002

Quantitative Structural Health Monitoring by Ultrasonic Guided Waves, 551

State of the Art for Genetic Algorithms and Beyond in Water Resources Planning and Management, 2001

Vision-Based Roadway Geometry Computation, 1814

Computational fluid dynamics technique

Coherent Structure Dynamics in Turbulent Flows Past In-Stream Structures: Some Insights Gained via Numerical Simulation, 1046

External Iterative Coupling Strategy for Surface-Subsurface Flow Calculations in Surface Irrigation, 1276

Junction and Drop-Shaft Boundary Conditions for Modeling Free-Surface, Pressurized, and Mixed Free-Surface Pressurized Transient Flows, 1015

Large Eddy Simulation of Flow and Tracer Transport in Multichamber Ozone Contactors, 611

Methodology for Wind-Driven Rainwater Intrusion Fragilities for Light-Frame Wood Roof Systems, 1676

Micromechanical Aspects of Liquefaction-Induced Lateral Spreading, 32

Multiple Linear Regression Model Approach for Aerosol Dispersion in Ventilated Spaces Using Computational Fluid Dynamics and Dimensional Analysis, 685

Numerical Simulations of Efficiency of Curb-Opening Inlets, 948

Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size, 771

Computer aided design

Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627

Design of Tall Formworks by a Finite-Element Model, 394

Innovation Diffusion Modeling in the Construction Industry, 347

Interaction of Lean and Building Information Modeling in Construction, 411

Object Recognition in Construction-Site Images Using 3D CAD-Based Filtering, 267

Computer aided simulation

Modeling Microtunneling Projects using Computer Simulation, 381

Computer analysis

Design and Construction of Modern Bamboo Bridges, 145

Study of Buckling in Steel Silos under Eccentric Discharge Flows of Stored Solids, 534

Computer applications

Automated Code Compliance Checking for Building Envelope Design, 280

Automatic Extraction of Apparent Semantic Structure from Text Contents of a Structural Calculation Document, 290

Computer Vision-Based Video Interpretation Model for Automated Productivity Analysis of Construction Operations, 284

Concept Relation Extraction from Construction Documents Using Natural Language Processing, 344

Computer hardware

Methodology for Estimating Optimum Reuse Time Span: Application to Reusable Computer Waste, 2114

Computer models

Finite-Element Analysis of Fluid-Structure Interaction in a Blast-Resistant Window System, 1636

Image-Based Machine Learning for Reduction of User Fatigue in an Interactive Model Calibration System, 283

Vibration Serviceability of a Building Floor Structure. I: Dynamic Testing and Computer Modeling, 1546

Computer networks

Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289

Computer programming

Comparison of Using Mixed-Integer Programming and Genetic Algorithms for Construction Site Facility Layout Planning, 425

Evapotranspiration Modeling Using Linear Genetic Programming Technique, 1278

Genetic Programming to Predict Bridge Pier Scour, 958

Genetic Programming to Predict River Pipeline Scour, 1577

Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Irrigation Scheduling with Genetic Algorithms, 1277

Life-Cycle Optimization of Pavement Overlay Systems, 1195

Long-Range Facility Planning Based on Dynamic Programming for Optimum Combined Cost and Probability Paths, 1562

Modeling Strength of High-Performance Concrete Using an Improved Grammatical Evolution Combined with Macrogenetic Algorithm, 287

Modeling the Time Variation of Reservoir Trap Efficiency, 1155

Multiobjective Allocation of Transboundary Water Resources: Case of the Euphrates and Tigris, 1968

Network-Level Infrastructure Management Using Approximate Dynamic Programming, 1173

Nonlinear Finite-Element Analysis Software Architecture Using Object Composition, 271

Optimizing Capacity-Expansion Planning of Groundwater Supply System between Cost and Subsidence, 1118

REILP Approach for Uncertainty-Based Decision Making in Civil Engineering, 294

RTC of Valves for Leakage Reduction in Water Supply Networks, 1973

Single-Stage Integer Programming Model for Long-Term Transit Fleet Resource Allocation, 1819

Computer software

Application of Software for Automatic Canal Management (SacMan) to the WM Lateral Canal, 1249

Downstream-Water-Level Control Test Results on the WM Lateral Canal, 1250

Expert System Software: Use Only as Directed, 2069

HTDP 3.0: Software for Coping with the Coordinate Changes Associated with Crustal Motion, 1776

Nonlinear Finite-Element Analysis Software Architecture Using Object Composition, 271

Numerical Simulations of Efficiency of Curb-Opening Inlets, 948

Place Identity and PlaceMaker: Planning the Urban Sustainability, 1932

Planning for Commercial Vehicle Weight Limit Change: Application and Computer Software, 2129

Practical Subgrade Model for Improved Soil-Structure Interaction Analysis: Software Implementation, 2157

Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319

Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251

SCIA: GIS-Based Software for Assessing the Impacts from Chemical Industrial Accidents, 2106

Three-Dimensional Seismic Response of a Full-Scale Light-Frame Wood Building: Numerical Study, 1611

Concentration

Modeling the Relationship between Capillary Suction Time and Specific Resistance to Filtration, 720

Concrete

Addressing Sulfate-Induced Heave in Lime Treated Soils, 784

Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674

Analytical Model for Circular Normal- and High-Strength Concrete Columns Confined with FRP, 233

Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188

Analytical Studies of Concrete-Filled Circular Steel Tubes under Axial Compression, 1664

Application of Results of Nondestructive Testing Methods in the Investigation of Microstructure of Refractory Concretes, 1439

Bacterial Kinetics of Sulfur Oxidizing Bacteria and Their Biodeterioration Rates of Concrete Sewer Pipe Samples, 695

Behavior of Concrete in Water Subjected to Dynamic Triaxial Compression, 496

Behavior of Driven Ultrahigh-Performance Concrete H-Piles Subjected to Vertical and Lateral Loadings, 910

Bond Behavior in Steel Fiber-Reinforced Concrete Zones under Static and Cyclic Loading: Experimental Evaluations and Analytical Modeling, 1417

Bond Performance of GFRP Bars in Tension: Experimental Evaluation and Assessment of *ACI 440 Guidelines*, 242

Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512

Capillary Shape: Influence on Water Transport within Unsaturated Alkali Activated Slag Concrete, 1369

Carbonation Curing of Slag-Cement Concrete for Binding CO_2 and Improving Performance, 1373

Case Study to Identify Barriers and Incentives to Implementing an Engineering Control for Concrete Grinding Dust, 437

Characterization of Fly Ash Bituminous Concrete Mixes, 1481

Comparative Performance of the SMAC Made with the SBS- and ST-Modified Binders, 1406

Comparison of Mechanical Properties for Polymer Concrete with Different Types of Filler, 1419

Composite Flexural Behavior of Full-Scale Concrete-Filled Tubes without Axial Loads, 1744

Compressive Strength and Heat Evolution of Concretes Containing Palm Oil Fuel Ash, 1459

Compressive Strength of Self-Compacting Concrete during High-Temperature Exposure, 1455

Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423

Design and Application of Risk Adjusted Cumulative Sum for Strength Monitoring of Ready Mixed Concrete, 376

Deterioration of Bond Integrity between Repair Material and Concrete due to Thermal and Mechanical Incompatibilities, 1354

Determination of the Main Parameters of Alkali Silica Reaction Using System Identification Method, 1441

Determining Hardness and Elastic Modulus of Asphalt by Nanoindentation, 22

Determining Reliability of an Asphalt Mix Design: Case of Marshall Method, 1791

Detrimental Effects on Coastal Concrete Structures by *Chaetomorpha Antennina*, 1440

Durability of Wet Bond of Hybrid Laminates to Cast-in-Place Concrete, 196

Dynamic Identification of a Concrete Bridge with Orthotropic Plate-Type Deck, 1666

Dynamic Response of Retrofitted Masonry Walls for Blast Loading, 542

Effect of Concrete Compositions in Energy Transmission of Surface Waves for Nondestructive Crack Depth Evaluation, 1425

Effect of Construction Induced Vibrations on Green Concrete in Drilled Shafts, 1412

Effect of Low-Density Polyethylene on Fracture Toughness of Asphalt Concrete Mixtures, 1457

Effect of Pore-Size Distribution on Shrinkage of Concretes, 1399

Effect of Temperature on the Setting Behavior of Concrete, 1363

Effective Curve Number and Hydrologic Design of Pervious Concrete Storm-Water Systems, 1102

Effects of Bulk Water Chemistry on Autogenous Healing of Concrete, 1398

Effects of Calcium Carbide Residue–Fly Ash Binder on Mechanical Properties of Concrete, 1474

Effects of Coarse Aggregate Coatings on Concrete Performance, 1350

Effects of Loading Rate and Duration on Axial Behavior of Concrete Confined by Fiber-Reinforced Polymer Sheets, 190

Effects of Water-Binder Ratio and Fine Aggregate–Total Aggregate Ratio on the Properties of Hwangtoh-Based Alkali-Activated Concrete, 1443

Embedded Cement-Based Piezoelectric Sensors for Acoustic Emission Detection in Concrete, 1494

Environmental Reduction Factors for GFRP Bars Used as Concrete Reinforcement: New Scientific Approach, 225

Evaluation of Bond Strength in Concrete Elements Externally Reinforced with CFRP Sheets and Anchoring Devices, 229

Experimental Investigation of the Influence of Moisture on the Bond Behavior of FRP to Concrete Interfaces, 258

Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517

Experimental Study of Normal- and High-Strength Concrete Confined with Fiber-Reinforced Polymers, 232

Explosion Performance of a Ball Powder Production Facility, 1528

Factors Study in Low-Temperature Fracture Resistance of Asphalt Concrete, 1355

Failure Mechanism of Empty and Concrete-Filled CFRP Box Beams, 209

Finite-Element Modeling of Short-Term Field Response of Composite Wood-Concrete Floors/Decks, 1677

Fire Design of Timber-Concrete Composite Slabs with Screwed Connections, 1629

Fresh and Hardened Properties of SCC Made with Different Aggregate and Mineral Admixtures, 1458

Fresh, Mechanical, and Durability Characteristics of Self-Consolidating Concrete Incorporating Volcanic Ash, 1414

Front and Side View Image Correlation Measurements on FRP to Concrete Pull-Off Bond Tests, 222

Glued Composite Timber-Concrete Beams. I: Interlayer Connection Specimen Tests, 1729

Glued Composite Timber-Concrete Beams. II: Analysis and Tests of Beam Specimens, 1730

Hybrid Control Charts for Active Control and Monitoring of Concrete Strength, 1348

Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105

Investigating the Alkali-Silica Reaction of Recycled Glass Aggregates in Concrete Materials, 1480

Laboratory Test and Numerical Simulation of Time-Dependent Thermomechanical Behavior of the Three-Gorges Dam, 1352

Lateral Out-of-Plane Strengthening of Masonry Walls with Composite Materials, 214

Machine Vision-Based Concrete Surface Quality Assessment, 335

Mechanical Behavior of an Innovative Hybrid Beam Made of Glulam and Ultrahigh-Performance Concrete Reinforced with FRP or Steel, 197

Mechanism behind the Size Effect Phenomenon, 465

Mesoscale Approach to Modeling Concrete Subjected to Thermomechanical Loading, 491

Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes, 1389

Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672

Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626

New Performance-Based Approach to Ensure Quality Curing during Construction, 1418

Nonlinear Finite-Element Analysis for Hysteretic Behavior of Thin-Walled Circular Steel Columns with In-Filled Concrete, 1745

Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

Nonlinear Unified Strength Criterion for Concrete under Three-Dimensional Stress States, 464

Permeability Reduction in Pervious Concretes due to Clogging: Experiments and Modeling, 1424

Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451

Problems with Hu-Duan Boundary Effect Model and Its Comparison to Size-Shape Effect Law for Quasi-Brittle Fracture, 463

Progressive Collapse Resistance of Steel-Concrete Composite Floors, 1724

Properties of SCC Produced with Limestone Filler or Viscosity Modifying Admixture, 1379

Proposed Behavioral Model for Deicer Scaling Resistance of Slag Cement Concrete, 1380

Pullout Behavior of Steel Fibers in Self-Compacting Concrete, 1340

Pullout Strength Models for FRP Anchors in Uncracked Concrete, 217

Residual Mechanical Properties of High-Strength Concretes after Exposure to Elevated Temperatures, 1346

Sensitivity of Model Parameter on Dynamic Behavior Simulation of HPC, 1485

Shear Strength of Steel Fiber-Reinforced Ultrahigh-Performance Concrete Beams without Stirrups, 1743

Slab-on-Grade versus Framed Slab, 94

Strength Deterioration of Plain and Metakaolin Concretes in Aggressive Sulfate Environments, 1385

Stress-Strain Behavior of Concrete in Hybrid FRP-Concrete-Steel Double-Skin Tubular Columns, 1646

Structural Performance of CFRP-Strengthened RC Slabs in a Corrosive Environment, 261

Time-Dependent Behavior of Concrete-Filled Steel Tubular Arch Bridge, 104

Use of High Fineness of Fly Ash to Improve Properties of Recycled Aggregate Concrete, 1404

Using Recycled Concrete Aggregates in New Zealand Ready-Mix Concrete Production, 1390

Wet Lay-Up Manufactured FRPs for Concrete and Masonry Repair: Influence of Water on the Properties of Composites and on Their Epoxy Components, 257

Concrete admixtures

Effect of Mixing Constituent toward Engineering Properties of POFA Cement-Based Aerated Concrete, 1372

Fresh and Hardened Properties of SCC Made with Different Aggregate and Mineral Admixtures, 1458

Improvement on SIFCON Performance by Fiber Orientation and High-Volume Mineral Admixtures, 1466

Influence of Antistripping Additives on Moisture Susceptibility of Warm Mix Asphalt Mixtures, 1461

Influence of Fly Ash on Unconfined Compressive Strength of Cement-Admixed Clay at High Water Content, 1345

Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages, 1371

Investigations on Pastes and Mortars of Ordinary Portland Cement Admixed with Wollastonite and Microsilica, 1374

Optimization of Cement Grouts Containing Silica Fume and Viscosity Modifying Admixture, 1377

Remediation and Air Void Stability of Hauled Self-Consolidating Concrete, 1445

Using Fly Ash, Clay, and Fibers for Simultaneous Improvement of Concrete Green Strength and Consolidatability for Slip-Form Pavement, 1361

Concrete beams

Analysis of Moment Redistribution in Fiber-Reinforced Polymer Plated RC Beams, 219

Analytical Solution for Fracture Analysis of CFRP Sheet–Strengthened Cracked Concrete Beams, 580

Assessment of Construction Joint Effect in Full-Scale Concrete Beams by Acoustic Emission Activity, 547

Behavior of RC Beams Retrofitted with CARDIFRC after Thermal Cycling, 1342

CFRP Repair of RC Beams with Shear-Span and Full-Span Corrosions, 208

Comparative Study of Acoustic Emission and Scanning Electron Microscope to Evaluate Fracture Process Zone in Concrete Beams, 1473

Deflection Prediction for FRP-Strengthened Concrete Beams, 200

Dynamic Properties of Lightweight Concrete Beams Made by Sedimentary Lightweight Aggregate, 1408

Experimental Observation on the Effectiveness of Fiber Sheet Strip Stirrups in Concrete Beams, 226

Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218

Flexural Behavior of Continuous FRP-Reinforced Concrete Beams, 243

Full Torsional Behavior of RC Beams Wrapped with FRP: Analytical Model, 205

Grooving as Alternative Method of Surface Preparation to Postpone Debonding of FRP Laminates in Concrete Beams, 255

Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227

New Approach for Modeling the Contribution of NSM FRP Strips for Shear Strengthening of RC Beams, 180

Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256

Numerical Model for Tracing the Response of FRP-Strengthened RC Beams Exposed to Fire, 248

Shear Strengthening of RC T-Beams Using Mechanically Anchored Unbonded Dry Carbon Fiber Sheets, 1497

Simple Plastic Model for Shear Critical SFRC Beams, 1647

Size Effects for Reinforced Concrete Beams Strengthened in Shear with CFRP Strips, 202

Strengthening RC T-Beams Subjected to Combined Torsion and Shear Using FRP Fabrics: Experimental Study, 206

Torsional Strength of RC Beams Considering Tension Stiffening Effect, 1741

Concrete blocks

Bend Strength of FRP Stirrups: Comparison and Evaluation of Testing Methods, 177

Experimental Analysis of Reinforced Concrete Block Masonry Walls Subjected to In-Plane Cyclic Loading, 1653

Finite-Element Model Approach to Determine Support Conditions and Effective Layout for Concrete Block Paving, 1471

Seismic Performance Parameters for Reinforced Concrete-Block Shear Wall Construction, 1495

Concrete columns

Active Confinement of Reinforced Concrete Bridge Columns Using Shape Memory Alloys, 102

Analytical Model for FRP Confinement of Concrete Columns with and without Internal Steel Reinforcement, 245

Axial Load Capacity of Concrete-Filled FRP Tube Columns: Experimental versus Theoretical Predictions, 199

Behavior and Effectiveness of FRP Wrap in the Confinement of Large Concrete Cylinders, 234

Behavior of Steel Fiber-Reinforced High-Strength Concrete Columns under Uniaxial Compression, 1728

Concrete Column Recognition in Images and Videos, 305

Confinement Effectiveness of FRP in Retrofitting Circular Concrete Columns under Simulated Seismic Load, 230

Effect of Geometric Discontinuities on Strains in FRP-Wrapped Columns, 189

Effect of Severe Environmental Exposures on CFRP Wrapped Concrete Columns, 184

Experimental Studies of Reinforced Concrete Bridge Columns under Axial Load Plus Biaxial Bending, 1607

Experimental Study of Rectangular RC Columns Strengthened with CFRP Composites under Eccentric Loading, 221

Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554

Investigation into the Effect of Bonding on FRP-Wrapped Cylindrical Concrete Columns, 246

Large-Scale Experimental Study of Precast Segmental Unbonded Posttensioned Concrete Bridge Columns for Seismic Regions, 1632

Retrofitting of Rectangular Columns with Deficient Lap Splices, 179

Simplified Model for Compressive Behavior of Concrete Columns Strengthened by Steel Angles and Strips, 482

Slenderness Effects on Circular CFRP Confined Reinforced Concrete Columns, 204

Truss Modeling of Concrete Columns in Compression, 558

Unified Strength Model Based on Hoek-Brown Failure Criterion for Circular and Square Concrete Columns Confined by FRP, 193

Concrete construction

Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502

Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Effective Monitoring of the Concrete Pouring Operation in an RFID-Based Environment, 272

Remediation and Air Void Stability of Hauled Self-Consolidating Concrete, 1445

Concrete pavements

Accuracy of Ground-Penetrating Radar for Concrete Pavement Thickness Measurement, 1558

Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194

Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Effect of Rejuvenation Methods on the Infiltration Rates of Pervious Concrete Pavements, 1098

Load Transfer Characteristics of Aggregate Interlocking in Concrete Pavement, 1810

Modeling of Crack Depths in Digital Images of Concrete Pavements Using Optical Reflection Properties, 1840

Potential for Clay Clogging of Pervious Concrete under Extreme Conditions, 1063

Quantification of the Environmental Benefits of Ultrafine/Nanotitanium Dioxide Photocatalyst Coatings for Concrete Pavement Using Hybrid Life-Cycle Assessment, 1179

Simplified Nonlinear Temperature Curling Analysis for Jointed Concrete Pavements, 1858

Structural Design of Interlocking Concrete Pavement for Municipal Streets and Roadways [ASCE/T&DI/ICPI 58-10], 2284

Thermal and Mechanical Properties at High Temperature of a Very High-Strength Durable Concrete, 1402

Using Fly Ash, Clay, and Fibers for Simultaneous Improvement of Concrete Green Strength and Consolidatability for Slip-Form Pavement, 1361

Utilizing Advanced Characterization Tools to Prevent Reflective Cracking, 1535

Concrete pipes

Nonlinear Finite-Element-Based Investigation of the Effect of Bedding Thickness on Buried Concrete Pipe, 1873

Recommendations for Design of Reinforced Concrete Pipe, 1564

Concrete slabs

Concrete Slab Installed with Carbon Fiber Heating Wire for Bridge Deck Deicing, 1841

Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625

Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716

Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111

Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714

Stress-Prediction Model for Airport Pavements with Jointed Concrete Slabs, 1859

Structural Performance of CFRP-Strengthened RC Slabs in a Corrosive Environment, 261

Concrete structures

Assessment of Existing Structures Based on Identification, 1614

Behavior of RC Beams Retrofitted with CARDIFRC after Thermal Cycling, 1342

Building Robustness Research during World War II, 1549

Condition Assessment of Corrosion-Distressed Reinforced Concrete Buildings Using Fuzzy Logic, 1552

Design of Tall Formworks by a Finite-Element Model, 394

Determination of the Main Parameters of Alkali Silica Reaction Using System Identification Method, 1441

Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734

Modeling Residual Displacements of Concrete Bridge Columns under Earthquake Loads Using Fiber Elements, 117

Monitoring System to Provide Assurance for Maintenance of Structures, 2128

Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710

Parametric Estimation for RC Flexural Members Based on Distributed Long-Gauge Fiber Optic Sensors, 1620

Probabilistic Assessment of Concrete Structure Durability under Reinforcement Corrosion Attack, 1553

Probabilistic Seismic Loss Assessment of a Vancouver High-Rise Building, 1630

Progressive Collapse Mechanisms of Brittle and Ductile Framed Structures, 556

Radial Basis Function Neural Network Models for Peak Stress and Strain in Plain Concrete under Triaxial Stress, 1447

Service Life Prediction for Concrete Structures by Time-Depth Dependent Chloride Diffusion Coefficient, 1477

Shear Characteristics and Design for High-Strength Self-Consolidating Concrete, 1705

State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181

Stiffness Degradation and Time to Cracking of Cover Concrete in Reinforced Concrete Structures Subject to Corrosion, 480

Time-Dependent Risk Assessment of Combined Overtopping and Structural Failure for Reinforced Concrete Coastal Structures, 2038

Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

Cone penetration

Slippage Failure of a New Hot-Mix Asphalt Overlay, 1521

Cone penetration tests

Estimation of Lateral Load Capacity of Rigid Short Piles in Sands Using CPT Results, 779

Evaluation of Flow Liquefaction and Liquefied Strength Using the Cone Penetration Test, 856

Evolution of the Pore-Pressure Field around a Moving Conical Penetrometer of Finite Size, 485

Hydraulic Property Estimation Using Piezocone Results, 818

Nonlinear Cone Penetration Test-Based Method for Predicting Footing Settlements on Sand, 813

Relationship between Texas Cone Penetrometer Tests and Axial Resistances of Drilled Shafts Socketed in Clay Shale and Limestone, 888

Confinement

Active Confinement of Reinforced Concrete Bridge Columns Using Shape Memory Alloys, 102

Analytical Model for Circular Normal- and High-Strength Concrete Columns Confined with FRP, 233

Analytical Model for FRP Confinement of Concrete Columns with and without Internal Steel Reinforcement, 245

Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188

Analytical Studies of Concrete-Filled Circular Steel Tubes under Axial Compression, 1664

Axial Load Capacity of Concrete-Filled FRP Tube Columns: Experimental versus Theoretical Predictions, 199

Behavior and Effectiveness of FRP Wrap in the Confinement of Large Concrete Cylinders, 234

Behavior and Modeling of Confined High-Strength Concrete, 201

Behavior of Steel Fiber-Reinforced High-Strength Concrete Columns under Uniaxial Compression, 1728

Effect of Severe Environmental Exposures on CFRP Wrapped Concrete Columns, 184

Effects of Loading Rate and Duration on Axial Behavior of Concrete Confined by Fiber-Reinforced Polymer Sheets, 190

Experimental Study of Normal- and High-Strength Concrete Confined with Fiber-Reinforced Polymers, 232

FRP Confinement of Tuff and Clay Brick Columns: Experimental Study and Assessment of Analytical Models, 235

Simplified Model for Compressive Behavior of Concrete Columns Strengthened by Steel Angles and Strips, 482

Slenderness Effects on Circular CFRP Confined Reinforced Concrete Columns, 204

Structural Upgrade Using Basalt Fibers for Concrete Confinement, 231

Unified Strength Model Based on Hoek-Brown Failure Criterion for Circular and Square Concrete Columns Confined by FRP, 193

Conflict

Attitude-Based Negotiation Methodology for the Management of Construction Disputes, 1328

Computerized DSS for Construction Conflict Resolution under Uncertainty, 438

Systems Management Study of a Private Brownfield Renovation, 1945

Connections

Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512

Comparison of Block-Shear and Whitmore Section Methods for Load Rating Existing Steel Truss Gusset Plate Connections, 110

Concept and Finite-Element Modeling of New Steel Shear Connectors for Self-Centering Wall Systems, 481

Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625

Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701

Design and Evaluation of Experimental Bridges in Tennessee, 1498

Displacement Method for the Long-Term Analysis of Steel-Concrete Beams with Flexible Connection, 1633

Evaluation of the Low-Cycle Fatigue Life in ASTM A706 and A615 Grade 60 Steel Reinforcing Bars, 1347

Externally Reinforced Welded I-Beam-to-Box-Column Seismic Connection, 461

Fatigue Testing of Stiffened Traffic Signal Structures, 1726

Fire Design of Timber-Concrete Composite Slabs with Screwed Connections, 1629

Fragility Assessment of Reduced Beam Section Moment Connections, 1720

Glued Composite Timber-Concrete Beams. I: Interlayer Connection Specimen Tests, 1729

Influence of Flexibility on the Fatigue Performance of the Base Plate Connection in High-Mast Lighting Towers, 1639

Interface Shear Connection Analysis of Ultrahigh-Performance Fiber-Reinforced Concrete Composite Girders, 141

Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

Large Membrane Roof Analysis: Nonlinear Modeling of Structures, Connectors, and Experimental Evidences, 93

Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116

Modeling and Behavior of Steel Plate Connections Subject to Various Fire Scenarios, 1696

Monotonic and Reverse-Cyclic Loading of Lag Screw Connections for Log Shear Wall Construction, 1349

New Yield Model for Wood Dowel Connections, 1731

Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685

Plastic Behavior of Shear Tabs Welded to Flexible Wall Support, 1725

Prediction of Net-Tension Strength for Multirow Bolted Connections of Pultruded Material Using the Hart-Smith Semiempirical Modeling Approach, 186

Progressive Collapse Resistance of Steel-Concrete Composite Floors, 1724

Rapid Ranking Procedures for Gusset Plate Connections in Existing Steel Truss Bridges, 149

Reduced Link Sections for Improving the Ductility of Eccentrically Braced Frame Link-to-Column Connections, 1662

Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238

Seismic Performance Factors for Cold-Formed Steel Special Bolted Moment Frames, 1702

Seismic Resistance Capacity of High-Rise Buildings Subjected to Long-Period Ground Motions: E-Defense Shaking Table Test, 1670

Simplified Procedure for Seismic Evaluation of Piles with Partial-Moment Connection to the Deck in Marine Oil Terminals, 1660

Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. I: NDS Design Equations, 1482

Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. II: Fracture Mechanics Equations, 1483

Strength Prediction for Rounded Dovetail Connections Considering Size Effects, 494

Three-Dimensional Finite-Element Modeling of Nailed Connections in Wood, 1678

Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761

Vibration Analysis of an Elastic Beam Subjected to a Moving Beam with Flexible Connections, 471

Wood Materials, Nails, and Sheathing Connections from Early 20th Century Residential Buildings, 1469

Conservation

Energy Conservation Opportunities in an Industrial Boiler System, 449

Evaluation of the Advection Scheme in the HSPF Model, 1075

Head Reconstruction Method to Balance Flux and Source Terms in Shallow Water Equations, 511

Life-Cycle Perspective on Residential Water Conservation Strategies, 1166

Constitutive models

Application of Exponential-Based Methods in Integrating the Constitutive Equations with Multicomponent Nonlinear Kinematic Hardening, 606

Behavior of an Atypical Embankment on Soft Soil: Field Observations and Numerical Simulation, 778

Behavior of RC Beams Retrofitted with CARDIFRC after Thermal Cycling, 1342

Constitutive Models for Tuff Masonry under Uniaxial Compression, 1467

Determining the Shapes of Yield Curves for Unsaturated Soils by Modified State Surface Approach, 796
Development and Validation of 3D Composite Structural Elements at Elevated Temperatures, 1634
Development and Validation of a Two-Phase Model for Reinforced Soil by Considering Nonlinear Behavior of Matrix, 530
Nonlocal Multilaminate Model for Strain Softening Analysis, 15
Prediction of Long-Term Municipal Solid Waste Landfill Settlement Using Constitutive Model, 2110
Soil Behavior and Geo-Micromechanics (GSP 200), 2280
Triaxial Deformation Behavior of Bituminous Mixes, 1353

Constitutive relations

High-Temperature Properties of Steel for Fire Resistance Modeling of Structures, 1388

Constructability

Organizational Divisions in BIM-Enabled Commercial Construction, 360
Rating City and County of Denver Urban Pavement Constructability Using a Profiler, 2133
Tolerance and Constructability of Soldier Piles in Slurry Walls, 1507

Construction

Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509
Design and Evaluation of Experimental Bridges in Tennessee, 1498
Design of Tall Formworks by a Finite-Element Model, 394
Determinants of Industry Acceptance for Highway Warranty Contracts: Alabama Case Study, 1172
Drilling Under DFW, 2193
Effect of Construction Induced Vibrations on Green Concrete in Drilled Shafts, 1412
Engineering the Tower and Main Span Construction of Stonecutters Bridge, 108
Evaluation of Stone Strong Gravity Wall System by Stone Strong Systems: Final Report, 2242
Evaluation of the Visibility of Workers' Safety Garments during Nighttime Highway-Maintenance Operations, 1850
Experimental Study on the Impact of Rainfall on RCC Construction, 362
Field Procedures for Real-World Measurements of Emissions from Diesel Construction Vehicles, 1186
Frequency of Change Orders in Highway Construction Using Alternate Count-Data Modeling Methods, 403
A Glittering Center, 2198
Impacts of Construction Activity on Bioretention Performance, 1094
Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Concept Development, 125
Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Fatigue Evaluation, 143
Innovation in Ingleside, 2195
Integrated Framework for Quantifying and Predicting Weather-Related Highway Construction Delays, 429
Integrated Project Delivery Case Study: Guidelines for Drafting Partnering Contract, 1316
Interactive Process of Microsimulation and Logistic Regression for Short-Term Work Zone Traffic Diversion, 1816
Is Construction Blasting Still Abnormally Dangerous?, 1311
Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116
Life-Cycle Assessment Modeling of Construction Processes for Buildings, 1184
Rapid Girder Selection and Cost Estimation for Simple-Made-Continuous Steel Bridge Design, 2158
Sleep Deprivation and Its Consequences in Construction Workers, 422
Steel Girder Stability during Bridge Erection: AASHTO LRFD Check on L/b Ratios, 167
SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractors for Bonding, 435
Sustainability Guidelines for the Structural Engineer, 2285

Construction companies

Doing Business the Right Way, 2196
Empirical Assessment of Internationalization Strategies for Small and Medium Construction Companies, 444
Empiricist Framework for TQM Implementation in Construction Companies, 1330
Improved SWOT Approach for Conducting Strategic Planning in the Construction Industry, 445
Performance Assessment of Construction Companies Integrating Key Performance Indicators and Data Envelopment Analysis, 372
Performance of MBE/DBE/WBE Construction Firms in Transportation Projects, 390
Project Management and Green Buildings: Lessons from the Rating Systems, 1588
Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319
Tailoring Competitive Advantages Derived from Innovation to the Needs of Construction Firms, 371
Understanding and Improving Your Risk Management Capability: Assessment Model for Construction Organizations, 400

Construction costs

Automated Generation of Customized Field Data Collection Templates to Support Information Needs of Cost Estimators, 274
CBR Revision Model for Improving Cost Prediction Accuracy in Multifamily Housing Projects, 1338
Estimation of Cost Contingency for Air Force Construction Projects, 431
Height and Construction Costs of Residential High-Rise Buildings in Shanghai, 430
Hybrid Model Incorporating Real Options with Process Centric and System Dynamics Modeling to Assess Value of Investments in Alternative Dispute Resolution Techniques, 300
Integrated Schedule and Cost Model for Repetitive Construction Process, 1325
Integrating Neurofuzzy System with Conceptual Cost Estimation to Discover Cost-Related Knowledge from Residential Construction Projects, 265
Preliminary Cost Estimation Model Using Case-Based Reasoning and Genetic Algorithms, 307
Probabilistic Approach for Budgeting in Portfolio of Projects, 350

Rework in Civil Infrastructure Projects: Determination of Cost Predictors, 342

Statistical Analysis on the Cost and Duration of Public Building Projects, 1327

Study of Real Options with Exogenous Competitive Entry to Analyze Dispute Resolution Ladder Investments in Architecture, Engineering, and Construction Projects, 352

Tailoring Competitive Advantages Derived from Innovation to the Needs of Construction Firms, 371

Three-Stage Least-Squares Analysis of Time and Cost Overruns in Construction Contracts, 434

Time Series Analysis of ENR Construction Cost Index, 436

Construction equipment

Case Study on the Evaluation of Equipment Flow at a Construction Site, 314

Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319

Construction industry

Activity Awareness as an Enabler for Communication and Network Building in Construction Design Teams, 301

Analysis of Dispute Review Boards Application in U.S. Construction Projects from 1975 to 2007, 1324

Applying Concept Similarity to the Evaluation of Common Understanding in Multidisciplinary Learning, 292

Assessing the Relevance of Media Synchronicity Theory to the Use of Communication Media in the AECO Industry, 81

Attitude-Based Negotiation Methodology for the Management of Construction Disputes, 1328

Autogeneration of Simulation Network of the Design Process, 303

Building Information Modeling in Architecture, Engineering, and Construction: Emerging Research Directions and Trends, 1595

Case Study to Identify Barriers and Incentives to Implementing an Engineering Control for Concrete Grinding Dust, 437

Charrettes as a Method for Engaging Industry in Best Practices Research, 321

Chinese Values and Stressors of Construction Professionals in Hong Kong, 442

Comparison of Contract General Conditions between United States and China, 89

Consistency and Reliability of Construction Arbitration Decisions: Empirical Study, 1323

Construction Mediation Landscape in the Civil Justice System in Hong Kong, 1308

Construction Research Congress 2010, 2231

Counterfactual Analysis of Sustainable Project Delivery Processes, 373

Critical Success Factors for Stakeholder Management: Construction Practitioners' Perspectives, 391

Developing an ARIS-House-Based Method from Existing Information Systems to Project-Based Enterprise Resource Planning for General Contractor, 334

Domain Ontology for Processes in Infrastructure and Construction, 387

Emergence and Role of Cultural Boundary Spanners in Global Engineering Project Networks, 1329

Emerging Hybrid Practices in Construction Design Work: Role of Mixed Media, 361

Empirical Assessment of Internationalization Strategies for Small and Medium Construction Companies, 444

Entropic Risk Analysis by a High Level Decision Support System for Construction SMEs, 270

Exploring the Potential for Predicting Project Dispute Resolution Satisfaction Using Logistic Regression, 365

Exploring the Potential of SME Alliances in the Construction Sector, 370

Global Dimension of Robust Project Network Design, 358

Immigration and Construction: Analysis of the Impact of Immigration on Construction Project Costs, 1334

Impact of the EU Mediation Directive on the German Construction Sector, 1307

Impacts of Stressors and Stress on the Injury Incidents of Construction Workers in Hong Kong, 423

Improved Baseline Productivity Analysis Technique, 351

Improved Baseline Productivity Analysis Technique

Improved SWOT Approach for Conducting Strategic Planning in the Construction Industry, 445

Innovation Diffusion Modeling in the Construction Industry, 347

Interactive and Dynamic Integrated Module for Mobile Cranes Supporting System Design, 332

Judging Unreasonable Litigation Behavior at the Interface of Mediation in the English Jurisdiction, 1306

Learning Applications in the Architectural Engineering Educational Setting, 90

Legal Issues of Integrated Network for Construction and Real Estate Sector, 1313

Management Thinking in the Earned Value Method System and the Last Planner System, 1337

Mediation for Public Construction Contracts under the GPA in Taiwan, 1305

Modeling the Heterogeneity in Contractors' Mark-Up Behavior, 386

Object Model Framework for Interface Modeling and IT-Oriented Interface Management, 333

Occupational Licensing of Building Trades: Case of Western Australia, 1603

Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316

Organizational Divisions in BIM-Enabled Commercial Construction, 360

Performance Assessment of Construction Companies Integrating Key Performance Indicators and Data Envelopment Analysis, 372

Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326

Performance of International Joint Ventures in Construction, 1336

Personal Construct-Based Factors Affecting Interpersonal Trust in a Project Design Team, 337

Piloting Evaluation Metrics for Sustainable High-Performance Building Project Delivery, 402

Positive Psychological Capital as a Source of Sustainable Competitive Advantage for Organizations, 348

Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry, 1582

Project Organizations as Social Networks, 359

Quantification of Losses of Labor Efficiencies: Innovations in and Improvements to the Measured Mile, 1302
Quantitative Methods for Design-Build Team Selection, 405
Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319
Relief from Bid Mistakes, 1304
Risk Management in the Construction Industry Using Combined Fuzzy FMEA and Fuzzy AHP, 416
Understanding Construction Industry Experience and Attitudes toward Integrated Project Delivery, 396
Washington State's I-405 Project: Women in Industry Leadership, 2073
Work-Family Conflict in Construction: Case for a Finer-Grained Analysis, 433

Construction management

Action Research as a Proactive Research Method for Construction Engineering and Management, 323
Adoption and Use of Interorganizational ICT in a Construction Project, 414
Analysis of Adverse Weather for Excusable Delays, 439
Analysis of Residential Framing Accidents, Activities, and Task Demands, 341
Application of a SOM-Based Optimization Algorithm in Minimizing Construction Time for Secant Pile Wall, 432
Application of Innovative Critical Chain Method for Project Planning and Control under Resource Constraints and Uncertainty, 419
Assessing the Accuracy of Applying Photogrammetry to Take Geometric Measurements on Building Products, 339
Below-Average Bidding Method, 408
Benchmarking Framework to Measure Extent of ICT Adoption for Building Project Management, 368
Benefits and Barriers of Construction Project Monitoring Using High-Resolution Automated Cameras, 377
Case Study on the Evaluation of Equipment Flow at a Construction Site, 314
Case-Based Reasoning Approach to Construction Safety Hazard Identification: Adaptation and Utilization, 331
Causes, Effects, Benefits, and Remedies of Change Orders on Public Construction Projects in Oman, 375
Causes of Delay in the Planning and Design Phases for Construction Projects, 84
Charrettes as a Method for Engaging Industry in Best Practices Research, 321
Clearing the Utilities on Time and Under Budget, 2064
Computer Vision-Based Video Interpretation Model for Automated Productivity Analysis of Construction Operations, 284
Computerized DSS for Construction Conflict Resolution under Uncertainty, 438
Concept Relation Extraction from Construction Documents Using Natural Language Processing, 344
Construction Research Congress 2010, 2231
Construction Risks: Single versus Portfolio Insurance, 1317
Construction Safety in Kuwait, 1502
Contemporaneous Time Series and Forecasting Methodologies for Predicting Short-Term Productivity, 418
Contextualist Research: Iterating between Methods While Following an Empirically Grounded Approach, 326
Critical Investigation into the Applicability of the Learning Curve Theory to Rebar Fixing Labor Productivity, 441
Critical Path Segments Scheduling Technique, 421
Data Preprocessing–Based Parametric Cost Model for Building Projects: Case Studies of Korean Construction Projects, 399
Design Error Classification, Causation, and Prevention in Construction Engineering, 1536
Dynamic Knowledge-Based Process Integration Portal for Collaborative Construction, 346
Effect of Contamination on Reinforcing Bar-Concrete Bond, 1515
Effect of Preconstruction Planning Effort on Sheet Metal Project Performance, 338
Effectiveness of ICT for Construction Information Exchange among Multidisciplinary Project Teams, 295
Electrical Transmission and Substation Structures 2009, 2240
Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532
Empire State Building Project: Archetype of "Mass Construction", 384
Empirical Modeling Methodologies for Construction, 318
Empirical Study of the Risks and Difficulties in Implementing Guaranteed Maximum Price and Target Cost Contracts in Construction, 364
Estimation of Cost Contingency for Air Force Construction Projects, 431
Ethnographic Theory-Building Research in Construction, 320
Evaluation of Risk Factors Leading to Cost Overrun in Delivery of Highway Construction Projects, 367
Excavation Game: Computer-Aided-Learning Tool for Teaching Construction Engineering Decision Making, 1600
Experimental Research in Construction, 317
Factors Affecting Construction Project Outcomes: Case Study of Vietnam, 1596
Forecasting Construction Manpower Demand by Gray Model, 443
Graduate Education in Construction Management, 1599
Health and Safety Management within Small- and Medium-Sized Enterprises (SMEs) in Developing Countries: Study of Contextual Influences, 424
Impact of Resources and Strategies on Construction Company Performance, 1318
Implementing Observational Research Methods to Study Team Performance in Construction Management, 322
Improved SWOT Approach for Conducting Strategic Planning in the Construction Industry, 445
Influence of Highway Project Characteristics on Contract Type Selection: Empirical Assessment, 1196
Integrated Simulation System for Construction Operation and Project Scheduling, 313
Integrating Neurofuzzy System with Conceptual Cost Estimation to Discover Cost-Related Knowledge from Residential Construction Projects, 265
Inter- and Intraorganizational Trust in International Construction Joint Ventures, 349

Interaction of Lean and Building Information Modeling in Construction, 411
Investigation on Particular Contractual Issues in Construction, 1312
LEED Implementation Guide for Construction Practitioners, 85
Life-Cycle Management of Construction Projects Based on Virtual Prototyping Technology, 1321
Longitudinal Study of Innovative Contracting Practices in State Departments of Transportation, 1303
Methodology for Conducting Discrete-Event Simulation Studies in Construction Engineering and Management, 315
Methods for Enlarging Transportation Tunnels while Keeping Tunnels Fully Operational, 2155
Mixed Method Research: Fundamental Issues of Design, Validity, and Reliability in Construction Research, 325
Model for Quantifying the Impact of Change Orders on Project Cost for U.S. Roadwork Construction, 415
Modeling Microtunneling Projects using Computer Simulation, 381
Models for Managing Contingency Construction Operations, 353
Object Model Framework for Interface Modeling and IT-Oriented Interface Management, 333
Object Recognition in Construction-Site Images Using 3D CAD-Based Filtering, 267
Optimizing Resource Utilization during the Recovery of Civil Infrastructure Systems, 1339
Owners Respond: Preferences for Task Performance, Delivery Systems, and Quality Management, 343
Pedagogy of Teaching Value Management in Postgraduate Construction and Property Program, 1591
Performance of International Joint Ventures in Construction, 1336
Practical Application of SWOT Analysis in the Management of a Construction Project, 2070
Practical Summer Training in Civil and Construction Engineering for Cultivation of Professional Ability, 1605
Predicting the Outcome of Construction Litigation Using an Integrated Artificial Intelligence Model, 269
Prediction System for Change Management in Construction Project, 380
Probabilistic Forecasting of Project Duration Using Kalman Filter and the Earned Value Method, 398
Profit Optimization for Multiproject Scheduling Problems Considering Cash Flow, 440
Project Compression with Nonlinear Cost Functions, 340
Project Management Application for Engineering Program Accreditation Preparation, 1586
Public versus Private Perceptions on Hiring an External Program Manager, 336
Qualitative Research: Application of the Delphi Method to CEM Research, 324
Quantification of Spatial Temporal Congestion in Four-Dimensional Computer-Aided Design, 378
Quantitative Risk Assessment of Cut-Slope Projects under Construction, 933
Ranking of the Factors Affecting Productivity of Microtunneling Projects, 1566
Removal of Redundant Relationships in an AON Project Network for Evaluating Schedule Complexity, 392
Role of Simulation in Construction Engineering and Management, 427
Scheduling Resource-Constrained Projects with Ant Colony Optimization Artificial Agents, 266
Statistical Analysis on the Cost and Duration of Public Building Projects, 1327
Three-Stage Least-Squares Analysis of Time and Cost Overruns in Construction Contracts, 434
Under Control, 2214
Understanding and Improving Your Risk Management Capability: Assessment Model for Construction Organizations, 400
Who Needs to Know What? Institutional Knowledge and Global Projects, 369
Work Stress, Support, and Mental Health in Construction, 379

Construction materials

Bridge Deck Patching Material Evaluation, 163
Characterization of Splitting Behavior of Bamboo Culms, 1479
Design and Application of Risk Adjusted Cumulative Sum for Strength Monitoring of Ready Mixed Concrete, 376
Durability and Environmental Performance of Alkali-Activated Tungsten Mine Waste Mud Mortars, 1444
Effects of Recycled Materials on Long-Term Performance of Cold In-Place Recycled Asphalt Roads, 1523
Evaluation of Geofoam as a Geotechnical Construction Material, 1357
Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542
Investigation of Flexural Properties of Cement-Stabilized Macadam Reinforced with Polypropylene Fiber, 1489
Optimizing Rolling Patterns for Chip Seals Using Laboratory Aggregate Loss Performance Tests on Field Fabricated Samples, 1520
Pavements and Materials, 2266
Paving Materials and Pavement Analysis (GSP 203), 2267
Performance of Bridge Materials by Structural Deficiency Analysis, 1530
Selection of Durable Closure Pour Materials for Accelerated Bridge Construction, 160
Stabilized Dredged Material. II: Geomechanical Behavior, 876
Steel Hexagonal Honeycomb Core Equivalent Elastic Moduli for Bridge Deck Sandwich Panels, 45
Sustainability Guidelines for the Structural Engineer, 2285

Construction methods

Accumulative Sliding Construction Method for Large-Span Latticed Shells, 428
Effect of Preconstruction Planning Effort on Sheet Metal Project Performance, 338
Evaluation of Geofoam as a Geotechnical Construction Material, 1357
Evaluation of Longitudinal Joint Construction Techniques for Asphalt Pavements in Tennessee, 1468
Modeling Construction Occupational Demand: Case of Hong Kong, 413

Construction sites
Case Study on the Evaluation of Equipment Flow at a Construction Site, 314
Comparison of Using Mixed-Integer Programming and Genetic Algorithms for Construction Site Facility Layout Planning, 425
Effects of a Construction Tower Crane on the Wind Loading of a High-Rise Building, 1749
Quantification of Spatial Temporal Congestion in Four-Dimensional Computer-Aided Design, 378
Runoff Characteristics for Construction Site Erosion Control Practices, 1245

Consulting services
Owners Respond: Preferences for Task Performance, Delivery Systems, and Quality Management, 343

Contacts
Dynamic Analysis of Gap Closing and Contact in the Mixed Lagrangian Framework: Toward Progressive Collapse Prediction, 555
Large Membrane Roof Analysis: Nonlinear Modeling of Structures, Connectors, and Experimental Evidences, 93
Modeling and Behavior of Steel Plate Connections Subject to Various Fire Scenarios, 1696

Containers
Containing the Constraints, 2190
Modeling Road Traffic Demand of Container Consolidation in a Chinese Port Terminal, 1883

Containment
Analytical Solutions for Contaminant Diffusion in Double-Layered Porous Media, 923
Effect of Diffuser Design on Thermal Comfort and Ventilation Efficiency, 2121
Hydrological Effects of Bounding the Venice (Italy) Industrial Harbor by a Protection Cutoff Wall: Modeling Study, 1144
Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829

Continuing education
Pavement Interactive: Pavement Knowledge Transfer with Web 2.0, 1914

Continuous beams
Flexural Behavior of Continuous FRP-Reinforced Concrete Beams, 243
Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626

Continuous structures
Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510

Continuum mechanics
Effect of Hanger Flexibility on Dynamic Response of Suspension Bridges, 602

Contract management
Concept Relation Extraction from Construction Documents Using Natural Language Processing, 344
Cost Savings Analysis of Performance-Based Contracts for Highway Maintenance Operations, 1189
Investigation on Particular Contractual Issues in Construction, 1312
Longitudinal Study of Innovative Contracting Practices in State Departments of Transportation, 1303
Project Administration for Design-Build Contract, 2272
Revisiting the Strengths and Limitations of Regulatory Contracts in Infrastructure Industries, 1197

Contraction
Anomalous Contraction Scour? Vertical-Contraction Case, 955

Contractors
Case Law and Variations in Cumulative Impact Productivity Claims, 397
Contractor Performance Evaluation for the Best Value of Superpave Projects, 374
Contractors' Competition Strategies in Bidding: Hong Kong Study, 420
Developing an ARIS-House-Based Method from Existing Information Systems to Project-Based Enterprise Resource Planning for General Contractor, 334
Effects of Pavement Spatial Variability on Contractor's Management Strategies, 1187
Efficacy of Using Support Vector Machine in a Contractor Prequalification Decision Model, 286
Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532
Empiricist Framework for TQM Implementation in Construction Companies, 1330
Measuring Performance for Building Maintenance Providers, 401
Practical Application of SWOT Analysis in the Management of a Construction Project, 2070
SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractors for Bonding, 435
Under Control, 2214

Contracts
Case Law and Variations in Cumulative Impact Productivity Claims, 397
Analysis of Adverse Weather for Excusable Delays, 439
Below-Average Bidding Method, 408
Case for Expanding the Claim Dispute Resolution Training of TxDOT Personnel, 1314
Comparison of Contract General Conditions between United States and China, 89
Determinants of Industry Acceptance for Highway Warranty Contracts: Alabama Case Study, 1172
Empirical Study of the Risks and Difficulties in Implementing Guaranteed Maximum Price and Target Cost Contracts in Construction, 364
Employing the Net Present Value-Consistent IRR Methods for PFI Contracts, 395
Influence of Highway Project Characteristics on Contract Type Selection: Empirical Assessment, 1196
Integrated Framework for Quantifying and Predicting Weather-Related Highway Construction Delays, 429
Investigation on Particular Contractual Issues in Construction, 1312
Legal Issues of Integrated Network for Construction and Real Estate Sector, 1313
Mediation for Public Construction Contracts under the GPA in Taiwan, 1305
Price Competitive Alliance Projects: Identification of Success Factors for Public Clients, 409
Project Administration for Design-Build Contract, 2272
Relief from Bid Mistakes, 1304

Scoring Approach to Construction Bond Underwriting, 410
Three-Stage Least-Squares Analysis of Time and Cost Overruns in Construction Contracts, 434

Control structures
Supervision and Water Depth Automatic Control of an Irrigation Canal, 1199

Control surveys
OPUS-RS Pair Points: Case Study, 1777

Control systems
Application of Software for Automatic Canal Management (SacMan) to the WM Lateral Canal, 1249
Autopilot Supported by Nonlinear Model Following Reconfigurable Flight Control System, 75
Ballistic Walking Design via Impulsive Control, 54
Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708
Downstream-Water-Level Control Test Results on the WM Lateral Canal, 1250
Feasibility Test of Adaptive Passive Control System Using MR Fluid Damper with Electromagnetic Induction Part, 484
Fines Accumulation and Distribution in a Storm-Water Rain Garden Nine Years Postconstruction, 1292
Flutter Control of Smart Composite Structures in Hygrothermal Environment, 73
Modeling Controlled Water Systems, 1244
Nonlinear Controller Synthesis for Single-Input Multiple-Output Systems with Application to Cruise Missile, 50
Preimpact Configuration Analysis of Dual-Arm Space Manipulator Capturing Object, 52
Research Validation: Challenges and Opportunities in the Construction Domain, 327
Reset to Zero and Specify Active Safety Systems according to Real-World Needs, 1837
Robust Control of PVTOL Aircraft with a Nonlinear Optimal Control Solution, 67
Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251
RTC of Valves for Leakage Reduction in Water Supply Networks, 1973
Supervised Gain-Scheduling Multimodel versus Linear Parameter Varying Internal Model Control of Open-Channel Systems for Large Operating Conditions, 1260

Convergence
Evaluation of Interslice Force Function and Discussion on Convergence in Slope Stability Analysis by the Lower Bound Method, 883
Experimental Analysis of Hydraulic Solver Convergence with Genetic Algorithms, 977

Cooling
Numerical Examination of a Method for Reducing the Temperature of Municipal Solid Waste Landfill Liners, 703
Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176

Cooling towers
Removal of TDS from Cooling Tower Water by Using EDTA-Modified Bagasse Fibers, 680

Cooling water
Removal of TDS from Cooling Tower Water by Using EDTA-Modified Bagasse Fibers, 680

Copper
Application of Natural Clayey Soil as Adsorbent for the Removal of Copper from Wastewater, 769
Degradation of Chlorobenzene in Water Using Nanoscale Cu Coupled with Microwave Irradiation, 658
Efficient Microwave Technology to Immobilize Heavy Metal Copper (Cu) Contaminated Soil by Microwave Energy, 2097

Core walls
Findings of Case Histories on the Long-Term Performance of Seepage Barriers in Dams, 775

Correlation
Assessing Rainfall Data Homogeneity and Estimating Missing Records in Mākaha Valley, O'ahu, Hawai'i, 1062
Delay Correlation of Mechanical Hysteresis and Damping, 1613
Modified Cross-Correlation Method for the Blind Identification of Structures, 545
Probabilistic Analysis of Soil-Water Characteristic Curves, 817
Rank Correlation Method for Evaluating Manual Pavement Distress Data Variability, 1169
Shear-Wave Velocity Correlations for Puyallup River Alluvium, 901
Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789

Corrosion
Aging Considerations in the Development of Time-Dependent Seismic Fragility Curves, 1753
Bacterial Kinetics of Sulfur Oxidizing Bacteria and Their Biodeterioration Rates of Concrete Sewer Pipe Samples, 695
CFRP Repair of RC Beams with Shear-Span and Full-Span Corrosions, 208
Condition Assessment of Corrosion-Distressed Reinforced Concrete Buildings Using Fuzzy Logic, 1552
Effective Repair for Corrosion Control Using FRP Wraps, 215
Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128
Exploring the Relationship between Soil Properties and Deterioration of Metallic Pipes Using Predictive Data Mining Methods, 288
Forensic Examination of a Noncomposite Adjacent Precast Prestressed Concrete Box Beam Bridge, 133
Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554
Improved Repair of Concrete Structures Using Polymer Concrete Patch and FRP Overlay, 1375
Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525
Monitoring System to Provide Assurance for Maintenance of Structures, 2128
Probabilistic Assessment of Concrete Structure Durability under Reinforcement Corrosion Attack, 1553
Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451

Probability of Failure Analysis due to Internal Corrosion in Cast-Iron Pipes, 1170

Simplified Methodology for the Evaluation of the Residual Strength of Corroded Reinforced Concrete Beams, 1506

Stiffness Degradation and Time to Cracking of Cover Concrete in Reinforced Concrete Structures Subject to Corrosion, 480

Structural Performance of CFRP-Strengthened RC Slabs in a Corrosive Environment, 261

Costs

Adaptive Climate Response Cost Models for Infrastructure, 1181

Artificial Neural Network Model for Cost Estimation: City of Edmonton's Water and Sewer Installation Services, 388

Benchmarking Current Conceptual High-Rise Design Processes, 87

Causes, Effects, Benefits, and Remedies of Change Orders on Public Construction Projects in Oman, 375

Considering Carbon Capture and Storage for Energy Generation from Municipal Solid Waste, 698

Cost Estimating Models for Utility Rehabilitation Projects: Neural Networks versus Regression, 1574

Data Preprocessing–Based Parametric Cost Model for Building Projects: Case Studies of Korean Construction Projects, 399

Design and Costs for Simple-Made-Continuous Rolled Steel Girder Bridges: Literature Survey, 2153

Disposal of Arsenic-Laden Adsorptive Media: Economic Analysis for California, 730

Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095

Empirical Study of the Risks and Difficulties in Implementing Guaranteed Maximum Price and Target Cost Contracts in Construction, 364

Evaluation of Risk Factors Leading to Cost Overrun in Delivery of Highway Construction Projects, 367

Expert System Approach for Soil Structure Interaction and Land Use, 1931

Formulation and Solution Approaches to the Rail Maintenance Production Gang Scheduling Problem, 1863

Immigration and Construction: Analysis of the Impact of Immigration on Construction Project Costs, 1334

Impacts of Transportation External Cost Pricing and Transit Fare Reductions on Household Mode/Route Choices and Environmental Improvements, 1954

Inspection, Condition Assessment, and Management Decisions for Commercial Roof Systems, 86

Judging Unreasonable Litigation Behavior at the Interface of Mediation in the English Jurisdiction, 1306

Life-Cycle Costs of Commercial Roof Systems, 79

Long-Range Facility Planning Based on Dynamic Programming for Optimum Combined Cost and Probability Paths, 1562

Modeling Microtunneling Projects using Computer Simulation, 381

Multiobjective Optimization for Water Distribution System Design Using a Hyperheuristic, 2019

Multiobjective Optimization of Time-Cost Trade-Off Using Harmony Search, 385

Optimal Maintenance and Repair Policies under Nonlinear Preferences, 1163

Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994

Optimizing Capacity-Expansion Planning of Groundwater Supply System between Cost and Subsidence, 1118

Owners Respond: Preferences for Task Performance, Delivery Systems, and Quality Management, 343

Project Compression with Nonlinear Cost Functions, 340

Rapid Girder Selection and Cost Estimation for Simple-Made-Continuous Steel Bridge Design, 2158

Special Report: The Infrastructure Roundtables: Address Life-Cycle Costs and Ongoing Maintenance, 2177

Special Report: The Infrastructure Roundtables: Concluding Thoughts—Address Life-Cycle Costs and Ongoing Maintenance, 2183

Valuing Drinking Water Provision as an Ecosystem Service in the Neuse River Basin, 2006

VCI, a Regional Volume/Capacity Index Model of Urban Congestion, 1801

Why Cost and Schedule Overruns on Mega Oil Sands Projects?, 2132

Coupled walls

Recommendations for Seismic Design of Hybrid Coupled Wall Systems, 2273

Coupling

Analysis of Frequency Nonstationarity via Continuous Wavelet Transform in the Response of Primary-Secondary Systems, 1763

Analytical Solution for Biot Flow–Induced Damping in Saturated Soil during Shear Wave Excitations, 919

Application of the Analytical Strip Method to Antisymmetric Laminates, 588

Comparison between Coupled and Uncoupled Consolidation Analysis of a Rigid Sphere in a Porous Elastic Infinite Space, 564

Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500

Experimental Evaluation of Posttensioned Precast Concrete Coupling Beams, 1713

Probabilistic Analysis of Coupled Soil Consolidation, 814

Seismic Design of Hybrid Coupled Wall Systems: State of the Art, 1683

Court decisions

Case Law and Variations in Cumulative Impact Productivity Claims, 397

Construction Mediation Landscape in the Civil Justice System in Hong Kong, 1308

Predicting the Outcome of Construction Litigation Using an Integrated Artificial Intelligence Model, 269

Cracking

Analysis of Snap-Back Instability due to End-Plate Debonding in Strengthened Beams, 479

Analytical Approach for Detection of Multiple Cracks in a Beam, 493

Analytical Solution for Fracture Analysis of CFRP Sheet–Strengthened Cracked Concrete Beams, 580

Assessment of Construction Joint Effect in Full-Scale Concrete Beams by Acoustic Emission Activity, 547

Behavior of Bridge Asphalt Plug Joints under Thermal and Traffic Loads, 118

Behavior of RC Beams Retrofitted with CARDIFRC after Thermal Cycling, 1342
Calibration of the SMCS Criterion for Ductile Fracture in Steels: Specimen Size Dependence and Parameter Assessment, 598
Characterization of Splitting Behavior of Bamboo Culms, 1479
Characterization of the Residual Stress State in Commercially Fully Toughened Glass, 1359
Comparative Study of Acoustic Emission and Scanning Electron Microscope to Evaluate Fracture Process Zone in Concrete Beams, 1473
Confinement Effectiveness of FRP in Retrofitting Circular Concrete Columns under Simulated Seismic Load, 230
Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706
Critical Assessment of Pavement Distress Segmentation Methods, 1789
Deformation and Cracking of Seepage Barriers in Dams due to Changes in the Pore Pressure Regime, 776
Deterioration of Bond Integrity between Repair Material and Concrete due to Thermal and Mechanical Incompatibilities, 1354
Development, Calibration, and Verification of a New Mechanistic-Empirical Reflective Cracking Model for HMA Overlay Thickness Design and Analysis, 1827
Discrete Element Analysis of the Influences of Aggregate Properties and Internal Structure on Fracture in Asphalt Mixtures, 1341
Dynamic Crack Propagations in Prestressed Concrete Sleepers in Railway Track Systems Subjected to Severe Impact Loads, 1682
Effect of Concrete Compositions in Energy Transmission of Surface Waves for Nondestructive Crack Depth Evaluation, 1425
Effects of Bulk Water Chemistry on Autogenous Healing of Concrete, 1398
Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130
Empirical Modeling of Pavement Overlay Crack Progression with Field Data, 1193
Estimation of Shear Strength of Structural Shear Walls, 1727
Experimental Study on Flexural Testing of Compacted Soil Beams, 1392
Factors Study in Low-Temperature Fracture Resistance of Asphalt Concrete, 1355
Fatigue Performance of Tension Steel Plates Strengthened with Prestressed CFRP Laminates, 237
Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477
First-Order Solutions for the Buckling Loads of Euler-Bernoulli Weakened Columns, 525
Forensic Examination of a Noncomposite Adjacent Precast Prestressed Concrete Box Beam Bridge, 133
Fractal Dimensions of Fracture Surfaces, 476
Fractal Dimensions of Fracture Surfaces
I-35W Bridge Collapse, 151
Impact of Polypropylene Application Method on Long-Term Aging of Polypropylene-Modified HMA, 1456
Improved Repair of Concrete Structures Using Polymer Concrete Patch and FRP Overlay, 1375
Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105
Influence of Surface Condition on the Inspection of Steel Bridge Elements Using the Time-of-Flight Diffraction Method, 157
Innovative ANN Technique for Predicting Failure/Cracking Load of Masonry Wall Panel under Lateral Load, 296
In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. II: Finite-Element Model, 251
Interface Behavior of a Bimaterial Plate under Dynamic Loading, 579
Investigating the Alkali-Silica Reaction of Recycled Glass Aggregates in Concrete Materials, 1480
Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525
Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129
Linear Elastic Fracture Mechanics Pullout Analyses of Headed Anchors in Stressed Concrete, 533
Linear Viscoelastic Modeling for Hot-Poured Crack Sealants at Low Temperature, 1454
Long-Term Behavior of Composite Beams under Positive and Negative Bending. I: Experimental Study, 1691
Long-Term Behavior of Composite Beams under Positive and Negative Bending. II: Analytical Study, 1692
Mechanism behind the Size Effect Phenomenon, 465
Mesh-Independent Fracture Modeling for Overlay Pavement System under Heavy Aircraft Gear Loadings, 1828
Mesoscale Approach to Modeling Concrete Subjected to Thermomechanical Loading, 491
Modeling of Crack Depths in Digital Images of Concrete Pavements Using Optical Reflection Properties, 1840
Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740
Moving-Wheel Fatigue for Bridge Decks Strengthened with CFRP Strips Subject to Negative Bending, 253
Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710
New Approach for Modeling the Contribution of NSM FRP Strips for Shear Strengthening of RC Beams, 180
New Performance-Based Approach to Ensure Quality Curing during Construction, 1418
Nondeformability of Ventilated and Mortar-Embedded Marble Facade Panels, 1496
Nonlinear Finite-Element Analysis for Hysteretic Behavior of Thin-Walled Circular Steel Columns with In-Filled Concrete, 1745
Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213
Plane-Strain Propagation of a Fluid-Driven Crack in a Permeable Rock with Fracture Toughness, 574
Problems with Hu-Duan Boundary Effect Model and Its Comparison to Size-Shape Effect Law for Quasi-Brittle Fracture, 463
Proposed Method for Determining the Interval for Hands-on Inspection of Steel Bridges with Fracture Critical Members, 127
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176

Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572
Shear Performance of RC Bridge Girders Reinforced with Carbon FRP Stirrups, 98
Slab-on-Grade versus Framed Slab, 94
Slippage Failure of a New Hot-Mix Asphalt Overlay, 1521
Static Stability Formulas of a Weakened Timoshenko Column: Effects of Shear Deformations, 608
Stiffness Degradation and Time to Cracking of Cover Concrete in Reinforced Concrete Structures Subject to Corrosion, 480
Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. II: Fracture Mechanics Equations, 1483
Structural Steel ASTM A709—Behavior at Uniaxial Tests Conducted at Lowered and Elevated Temperatures, Short-Time Creep Response, and Fracture Toughness Calculation, 567
Study of Stress Intensity Factor of a Cracked Steel Plate with a Single-Side CFRP Composite Patching, 254
Techniques for Predicting Cracking Pattern of Masonry Wallet Using Artificial Neural Networks and Cellular Automata, 277
Thermal and Mechanical Properties at High Temperature of a Very High-Strength Durable Concrete, 1402
Use of Mixed-Mode Fracture Interfaces for the Modeling of Large-Scale FRP-Strengthened Beams, 259
Utilizing Advanced Characterization Tools to Prevent Reflective Cracking, 1535

Cranes

Effects of a Construction Tower Crane on the Wind Loading of a High-Rise Building, 1749
Interactive and Dynamic Integrated Module for Mobile Cranes Supporting System Design, 332

Creep

Characterization of Fly Ash Bituminous Concrete Mixes, 1481
Compressive Creep of Virgin HDPE Using Equivalent Strain Energy Density Method, 1488
Design of Dynamically Wind-Loaded Helical Piers for Small Wind Turbines, 1538
Determination of Shear and Bulk Moduli of Viscoelastic Solids from the Indirect Tension Creep Test, 565
Development and Evaluation of the Hard-Grade Asphalt, 1432
Displacement Method for the Long-Term Analysis of Steel-Concrete Beams with Flexible Connection, 1633
Effects of Loading Rate and Duration on Axial Behavior of Concrete Confined by Fiber-Reinforced Polymer Sheets, 190
Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822
Exhumed Geogrid-Reinforced Retaining Wall, 902
Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716
Laboratory Test and Numerical Simulation of Time-Dependent Thermomechanical Behavior of the Three-Gorges Dam, 1352
Long-Term Behavior of Composite Beams under Positive and Negative Bending. I: Experimental Study, 1691
Long-Term Behavior of Composite Beams under Positive and Negative Bending. II: Analytical Study, 1692
Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256
Parametric Study of Posttensioned Inverted-T Bridge System for Improved Durability and Increased Span-to-Depth Ratio, 164
Prediction of Long-Term Municipal Solid Waste Landfill Settlement Using Constitutive Model, 2110
Ranking Binder Creep Performance Using the ARRB Elastometer, 1391
Research on High- and Low-Temperature Properties of Asphalt-Mineral Filler Mastic, 1434
Structural Performance of Wood Plastic Composite Sheet Piling, 1484
Structural Steel ASTM A709—Behavior at Uniaxial Tests Conducted at Lowered and Elevated Temperatures, Short-Time Creep Response, and Fracture Toughness Calculation, 567
Sustained-Load and Fatigue Performance of a Hybrid FRP-Concrete Bridge Deck System, 260
Thermoviscoelastic Analysis and Creep Testing of Ambient Temperature Cure Epoxies Used in Adhesive Anchor Applications, 1460
Time Effects Relate to Crushing in Sand, 893

Critical flow

Celerity and Amplification of Supercritical Surface Waves, 1009
Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987
Critical Depth Relationships in Developing Open-Channel Flow, 960
Design of a Scroll Vortex Inlet for Supercritical Approach Flow, 1030
Discontinuous Galerkin Finite-Element Method for Simulation of Flood in Crossroads, 992
Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136
Subcritical Contraction for Improved Open-Channel Flow Measurement Accuracy with an Upward-Looking ADVM, 1269
Two-Dimensional Simulation of Subcritical Flow at a Combining Junction: Luxury or Necessity?, 1024

Critical loads

Experimental Investigation of the Axial Capacity of Inelastically Pretwisted Steel Bars, 560

Critical path method

Critical Path Segments Scheduling Technique, 421
Integrated Framework for Quantifying and Predicting Weather-Related Highway Construction Delays, 429
Multiobjective Optimization of Time-Cost Trade-Off Using Harmony Search, 385

Crops

Comparison of Ordinary Kriging, Regression Kriging, and Cokriging Techniques to Estimate Soil Salinity Using LANDSAT Images, 1240
OCCASION: New Planning Tool for Optimal Climate Change Adaption Strategies in Irrigation, 1290
Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224

Cross sections
Effect of Bracing on Linear Free Vibration Characteristics of Thin-Walled Beams with Open Cross Section, 487
Fully Coupled 10-Degree-of-Freedom Beam Theory for Piecewise Straight Thin-Walled Beams with General Quadrilateral Cross Sections, 1762
Iterative Formulas and Estimation Formulas for Computing Normal Depth of Horseshoe Cross-Section Tunnel, 1286
Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072
Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626
New Structural Model for Multicomponent Pile Cross Sections under Axial Load, 859
Plastic Behavior of Shear Tabs Welded to Flexible Wall Support, 1725
Shear Capacity of the Flange-Web Intersections of Brick Masonry Nonrectangular Sections, 1665
Truncating Cross-Sectional Groundwater Models under Wetlands, 1110

Crossings
Risk Evaluation for Maxi Horizontal Directional Drilling Crossing Projects, 1572

Crude oil
Numerical Simulation Software for Oil Sand Slurry Flow in Flexible Pipelines, 452
Using Flotation to Separate Oil Spill Contaminated Beach Sands, 625
Why Cost and Schedule Overruns on Mega Oil Sands Projects?, 2132

Culverts
Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517
Method of Superimposition for Suction Force on Trash Rack, 1285
Pinning Force during Closure Process at Blocked Pipe Entrance, 1215
Recommendations for Design of Reinforced Concrete Pipe, 1564
Seismic Design and Analysis of Buried Culverts and Structures, 1575
Slip-Lined Culvert Inlet End Treatment Hydraulics, 1202
Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854
Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103
Trenchless Renewal of Culverts and Storm Sewers, 2291

Curing
Effect of Wetting on Unconfined Compressive Strength of Cemented Sands, 940
Improvement on SIFCON Performance by Fiber Orientation and High-Volume Mineral Admixtures, 1466
New Performance-Based Approach to Ensure Quality Curing during Construction, 1418

Currents
Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039
Modified Thermal Theory for Gravity Currents on Sloping Boundaries, 1028
Validation of Two Wave and Nearshore Current Models, 2032

Curricula
Architectural Engineering Curriculum at Missouri University of Science and Technology, 83
Pedagogy of Teaching Value Management in Postgraduate Construction and Property Program, 1591
Practical Summer Training in Civil and Construction Engineering for Cultivation of Professional Ability, 1605
Project Management Application for Engineering Program Accreditation Preparation, 1586

Curvature
Behavior of Hollow Tubular-Flange Girder Systems for Curved Bridges, 1624
End Forces on Crossframes in Horizontally Curved Steel I-Girder Bridges, 2130
Multiscale Curvature Analysis of Asphaltic Aggregate Particles, 308

Cyclic loads
Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674
Analysis of Soil Strength Degradation during Episodes of Cyclic Loading, Illustrated by the T-Bar Penetration Test, 23
Assessment of Subballast Filtration under Cyclic Loading, 921
Bond Behavior in Steel Fiber-Reinforced Concrete Zones under Static and Cyclic Loading: Experimental Evaluations and Analytical Modeling, 1417
CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183
Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751
Class A Prediction of the Behavior of Soft Estuarine Soil Foundation Stabilized by Short Vertical Drains beneath a Rail Track, 841
Determination of Fatigue Life of a Granular Base Material Lightly Stabilized with Slag Lime from Indirect Diametral Tensile Testing, 1867
Effect of Wrinkles on the Circumferential Strength of a Cast-in-Place Composite Polymer Liner Used in Retrofitting Pressure Pipes, 1492
Effectiveness of Viscoelastic Models for Prediction of Tensile Axial Strains during Cyclic Loading of High-Density Polyethylene Pipe, 1570
Elongation of Reinforced Concrete Members Subjected to Cyclic Loading, 1711
Experimental Analysis of Reinforced Concrete Block Masonry Walls Subjected to In-Plane Cyclic Loading, 1653
Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26
FE Modeling of FRP-Repaired Planar Concrete Elements Subjected to Monotonic and Cyclic Loading, 247
Field Assessment of the Performance of a Ballasted Rail Track with and without Geosynthetics, 863
Hysteresis Model of Thin Infill Plate for Cyclic Nonlinear Analysis of Steel Plate Shear Walls, 1746
Monotonic and Reverse-Cyclic Loading of Lag Screw Connections for Log Shear Wall Construction, 1349
Performance of Log Shear Walls Subjected to Monotonic and Reverse-Cyclic Loading, 1609

Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905
Retrofitting of Rectangular Columns with Deficient Lap Splices, 179
Seismic Performance Parameters for Reinforced Concrete-Block Shear Wall Construction, 1495
Seismic Rehabilitation of Corner RC Beam-Column Joints Using CFRP Composites, 244
Simple Model for the Cyclic Behavior of Smooth Sand-Steel Interfaces, 874
Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531
Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916

Cyclic tests

Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509
Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701
Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185
Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740
Strength Measurement for Near-Seabed Surface Soft Soil Using Manually Operated Miniature Full-Flow Penetrometer, 925
Triaxial Deformation Behavior of Bituminous Mixes, 1353
Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789

Cylinders

Behavior and Effectiveness of FRP Wrap in the Confinement of Large Concrete Cylinders, 234
Determining Thermal Conductivity of Paving Materials Using Cylindrical Sample Geometry, 1360
Implementation and Application of a New Elastoplastic Model Based on a Multiaxial Criterion to Assess the Stress State near Underground Openings, 13

Cylindrical shells

Free Vibration Analysis of Cylindrical Shells Supported on Parts of the Edges, 42

Czech Republic

Assessment of Flooding Risk to Cultural Heritage in Historic Sites, 1539

Dam failures

Contact Erosion at the Interface between Granular Coarse Soil and Various Base Soils under Tangential Flow Condition, 846
Draining the Tangjiashan Barrier Lake, 1037
Ka Loko Dam Break, 1310
Laboratory Experiments on the Failure of Coarse Homogeneous Sediment Natural Dams on a Sloping Bed, 1033
Numerical Simulation of Shallow-Water Flow Using a Modified Cartesian Cut-Cell Approach, 498
Predicting Peak Outflow from Breached Embankment Dams, 1090
Rating Curves for Dam-Break Flows, 1061
Simplified Method for the Characterization of the Hydrograph following a Sudden Partial Dam Break, 1014
Simplified versus Detailed Two-Dimensional Approaches to Transient Flow Modeling in Urban Areas, 970

Dam safety

Contact Erosion at the Interface between Granular Coarse Soil and Various Base Soils under Tangential Flow Condition, 846
Empirical Relationship between Large Dams and the Alteration in Extreme Precipitation, 2087
Practical Formulas for Frequency Domain Analysis of Earthquake-Induced Dam-Reservoir Interaction, 470
Predicting Peak Outflow from Breached Embankment Dams, 1090
Probability Analysis of Hydrological Loads for the Design of Flood Control Systems Using Copulas, 1092
Reliability Analysis of Earth Dams, 872

Damage

Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509
Assessment of Existing Structures Based on Identification, 1614
Assessment of Thermal Damage in Hybrid Fiber-Reinforced Concrete, 1437
Building Damage due to Riverine and Coastal Floods, 1992
Condition Assessment of Corrosion-Distressed Reinforced Concrete Buildings Using Fuzzy Logic, 1552
Coupled Micromechanical Model of Moisture-Induced Damage in Asphalt Mixtures, 1382
Damage Identification in a Truss Tower by Regularized Model Updating, 1637
Deficiency Analysis of Coastal Buildings toward Storm Damage Reduction, 1508
Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578
Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502
Direct Joint Probability Method for Estimating Extreme Sea Levels, 2035
Dynamic Numerical Analysis of Antimoisture-Damage Mechanism of Permeable Pavement Base, 36
Estimating the Social and Economic Consequences of Natural Hazards: Fiscal Impact Example, 2083
Experimental Investigation of Bending Fatigue Response of Grouted Stay Cables, 106
Explosion Phenomena and Effects of Explosions on Structures. I: Phenomena and Effects, 2143
Explosion Phenomena and Effects of Explosions on Structures. II: Methods of Analysis (Explosion Effects), 2144
Explosion Phenomena and Effects of Explosions on Structures. III: Methods of Analysis (Explosion Damage to Structures) and Example Cases, 2145
Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218
Field Damage Survey of New Orleans Homes in the Aftermath of Hurricane Katrina, 2078
Flood Damage to Historic Buildings and Structures, 1540

Fragility Assessment of Reduced Beam Section Moment Connections, 1720

Handling the Temperature Effect in Vibration Monitoring: Two Subspace-Based Analytical Approaches, 495

Identification and Monitoring of Modal Parameters in Aircraft Structures Using the Natural Excitation Technique (NExT) Combined with the Eigensystem Realization Algorithm (ERA), 49

In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study, 150

Integrating Global Positioning System with Laser Technology to Capture As-Built Information during Open-Cut Construction, 1580

Investigation into the Effect of Bonding on FRP-Wrapped Cylindrical Concrete Columns, 246

Investigation of the Use of Lightweight Aggregate Hot-Mixed Asphalt in Flexible Pavements in Frost Susceptible Areas, 1358

Laboratory Evaluation of Moisture Susceptibility of Hot-Mix Asphalt Containing Cementitious Fillers, 1416

Lateral Seismic Performance of Multipanel Precast Hollowcore Walls, 1686

Load Vectors for Damage Location in Systems Identified from Operational Loads, 462

Mesomechanical Model for Numerical Study of Two-Dimensional Triaxially Braided Composite, 595

Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289

Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510

Moving-Wheel Fatigue for Bridge Decks Strengthened with CFRP Strips Subject to Negative Bending, 253

Multiple Flood Source Expected Annual Damage Computations, 1991

Multivariate Statistical Approach to Structural Damage Detection, 460

Nanoscale Evaluation of Moisture Damage in Polymer Modified Asphalts, 1421

New Parameter to Evaluate Moisture Damage of Asphalt-Aggregate Bond in Using Dynamic Shear Rheometer, 1370

Nonlinear Identification of Lumped-Mass Buildings Using Empirical Mode Decomposition and Incomplete Measurement, 486

Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

Numerical Simulation of Damage Localization in Polyester Mooring Ropes, 552

Pisco, Peru, Earthquake of August 15, 2007, 2269

Quantification of Losses of Labor Efficiencies: Innovations in and Improvements to the Measured Mile, 1302

Reconstruction Method for Damage Detection in Beams Based on Natural Frequency and Antiresonant Frequency Measurements, 492

Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572

Seismic Damage Estimation for Buried Pipelines: Challenges after Three Decades of Progress, 1563

Simplified Damage Assessment Method for Buried Structures against External Blast Load, 1667

Simplified Nonlinear Temperature Curling Analysis for Jointed Concrete Pavements, 1858

Social Vulnerability and Hurricane Impact Modeling, 2084

Some Comments on the Protection of Lunar Habitats against Damage from Meteoroid Impacts, 48

Time-Temperature Superposition for HMA with Growing Damage and Permanent Strain in Confined Tension and Compression, 1387

Unified Strength Model Based on Hoek-Brown Failure Criterion for Circular and Square Concrete Columns Confined by FRP, 193

Wave Overtopping and Damage Progression of Stone Armor Layer, 2052

Damping

Aerodynamic Damping in the Along-Wind Response of Tall Buildings, 1617

Analysis of Frequency Nonstationarity via Continuous Wavelet Transform in the Response of Primary-Secondary Systems, 1763

Analysis of Tall Buildings with Damped Outriggers, 1747

Analytical Solution for Biot Flow–Induced Damping in Saturated Soil during Shear Wave Excitations, 919

Complex Frequencies in Elastodynamics, with Application to the Damping-Solvent Extraction Method, 522

Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708

Damped Properties and Noether Symmetries of Damped Free Vibration, 2134

Damping Parameter Identification and Study of Metal Foam Filled Steel Tube, 1384

Delay Correlation of Mechanical Hysteresis and Damping, 1613

Dynamic Behavior of Stay Cables with Rotational Dampers, 528

Dynamic Properties of Lightweight Concrete Beams Made by Sedimentary Lightweight Aggregate, 1408

Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550

Extended Boussinesq Equations for Water-Wave Propagation in Porous Media, 521

Feasibility Test of Adaptive Passive Control System Using MR Fluid Damper with Electromagnetic Induction Part, 484

Modular High-Force Seismic Magneto-Rheological Fluid Damper, 1619

Optimal Tuning of Amplitude Proportional Coulomb Friction Damper for Maximum Cable Damping, 1618

Stochastic Response of an Inclined Shallow Cable with Linear Viscous Dampers under Stochastic Excitation, 599

Tall Building Response Parameters: Sensitivity Study Based on Orthogonal Factorial Experiment Design Technique, 1622

Vibration Performance of Lightweight Cold-Formed Steel Floors, 1671

Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Dams

Celebrating Hoover Dam: In Appreciation of a Civil Engineering Icon, 2215

Celebrating Hoover Dam: Mission of Boulder Dam Fulfilled, 2218

Celebrating Hoover Dam: Significance of Boulder Canyon Project, 2217
Celebrating Hoover Dam: The Majesty of Hoover Dam, 2216
Contact Erosion at the Interface between Granular Coarse Soil and Various Base Soils under Tangential Flow Condition, 846
Deformation and Cracking of Seepage Barriers in Dams due to Changes in the Pore Pressure Regime, 776
Design of Settling Basins in Irrigation Network Using Simulation and Mathematical Programming, 1210
Experimental Study on the Impact of Rainfall on RCC Construction, 362
Findings of Case Histories on the Long-Term Performance of Seepage Barriers in Dams, 775
Hoover Dam, 2256
Laboratory Test and Numerical Simulation of Time-Dependent Thermomechanical Behavior of the Three-Gorges Dam, 1352
Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054
Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114
Time-Domain Hydrodynamic Forces on Rigid Dams with Reservoir Bottom Absorption of Energy, 585

Dams, earth

Predicting Peak Outflow from Breached Embankment Dams, 1090
Reliability Analysis of Earth Dams, 872

Darcy's law

Boundary Condition of Groundwater Flow through Sloping Seepage Face, 1129
Classroom Activities to Illustrate Concepts of Darcy's Law and Hydraulic Conductivity, 1583
Physically Based Green Roof Model, 1101

Data analysis

Application of Hilbert-Huang Transform Method for Analyzing Toxic Concentrations in the Niagara River, 1066
Artificial Intelligence Techniques as Detection Tests for the Identification of Shifts in Hydrometric Data, 298
Assessing Rainfall Data Homogeneity and Estimating Missing Records in Mākaha Valley, O'ahu, Hawai'i, 1062
Clarifying the Relationship between Quality of Global Positioning System Data and Precision of Positioning, 1771
Collection and Analysis of Critical Infrastructure Interdependency Relationships, 311
Community-Based, Macrolevel Collision Prediction Model Use with a Regional Transportation Plan, 1802
Data Analysis Techniques for GPR Used for Assessing Railroad Ballast in High Radio-Frequency Environment, 1830
Data and Modeling Issues Faced during the Efficiency Measurement of Road Maintenance Using Data Envelopment Analysis, 1164
Data Consolidation from Hydroelectric Plants, 456
Data Preprocessing–Based Parametric Cost Model for Building Projects: Case Studies of Korean Construction Projects, 399
Efficiency Measurement of Bridge Maintenance Using Data Envelopment Analysis, 1165
Efficient Model Correction Method with Modal Measurement, 468
Empirical Modeling Methodologies for Construction, 318
Estimation of Power Spectra of Acoustic-Doppler Velocimetry Data Contaminated with Intermittent Spikes, 982
Filtering Bad Measurement Data for Water Distribution System Demand Estimation, 2010
Generalization of ET_o ANN Models through Data Supplanting, 1218
Improved Baseline Productivity Analysis Technique, 351
Improved Baseline Productivity Analysis Technique
Integrated Conveyance Condition Assessment Techniques Support Asset Management and Capacity Driven Projects, 1573
Interpolating Surface Gravity Data for Assessing the Accuracy of a Ground Inertial Navigation System/Global Positioning System Gravimetric System, 1783
Low-Dimensional Proper Orthogonal Decomposition Modeling as a Fast Approach of Aerodynamic Data Estimation, 43
Measuring Transfer Efficiency of Urban Public Transportation Terminals by Data Envelopment Analysis, 1951
Mixed Method Research: Fundamental Issues of Design, Validity, and Reliability in Construction Research, 325
Modeling the Relationship between Capillary Suction Time and Specific Resistance to Filtration, 720
Multimodel Structural Performance Monitoring, 1736
Multivariate Statistical Approach to Structural Damage Detection, 460
Neural Network–Swarm Intelligence Hybrid Nonlinear Optimization Algorithm for Pavement Moduli Back-Calculation, 1844
Performance Assessment of Construction Companies Integrating Key Performance Indicators and Data Envelopment Analysis, 372
Problems with Hu-Duan Boundary Effect Model and Its Comparison to Size-Shape Effect Law for Quasi-Brittle Fracture, 463
Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319
Relationship between Access Management and Other Physical Roadway Characteristics and Safety, 1804
Rigorous Estimation of Local Accuracies, 1780
Robust Multivariate Outlier Detection Methods for Environmental Data, 755
Size Effects for Reinforced Concrete Beams Strengthened in Shear with CFRP Strips, 202
Undular Tidal Bores: Basic Theory and Free-Surface Characteristics, 1041
Using GPS Data to Gain Insight into Public Transport Travel Time Variability, 1855

Data collection

Automated Generation of Customized Field Data Collection Templates to Support Information Needs of Cost Estimators, 274
Automatic Extraction of Apparent Semantic Structure from Text Contents of a Structural Calculation Document, 290

Computer Vision-Based Video Interpretation Model for Automated Productivity Analysis of Construction Operations, 284
Effective Monitoring of the Concrete Pouring Operation in an RFID-Based Environment, 272
Empirical Modeling Methodologies for Construction, 318
Exploring the Relationship between Soil Properties and Deterioration of Metallic Pipes Using Predictive Data Mining Methods, 288
Infilling Missing Daily Evapotranspiration Data Using Neural Networks, 1235
Influence of Vertical Sensor Placement on Data Collection Efficiency from Bluetooth MAC Address Collection Devices, 1907
Integrating Neurofuzzy System with Conceptual Cost Estimation to Discover Cost-Related Knowledge from Residential Construction Projects, 265
Integration of GIS and Data Mining Technology to Enhance the Pavement Management Decision Making, 1825
Model Development and Validation for Intelligent Data Collection for Lateral Spread Displacements, 304
Peer-to-Peer-Based Publish/Subscribe Architecture for Advanced Infrastructure Systems, 268
Rank Correlation Method for Evaluating Manual Pavement Distress Data Variability, 1169
Sensor Network for Structural Health Monitoring of a Highway Bridge, 263
Spatial Decision Support System for Urban Planning: Case Study of Harbin City in China, 1933
Suspended Wash Load Transport of Nonuniform Sediments, 999
Validation and Application of Empirical Liquefaction Models, 931
Vision-Based Roadway Geometry Computation, 1814

Data communication

Exchange Model and Exchange Object Concepts for Implementation of National BIM Standards, 264
Peer-to-Peer-Based Publish/Subscribe Architecture for Advanced Infrastructure Systems, 268

Data processing

3D Surface Modeling and Measuring System for Pneumatic Caisson, 282
Application of Two-Directional Time Series Models to Replace Missing Data, 661
Assessing Rainfall Data Homogeneity and Estimating Missing Records in Mākaha Valley, O'ahu, Hawai'i, 1062
Critical Assessment of Interstory Drift Measurements, 1760
Dynamic Incident Progression Curve for Classifying Secondary Traffic Crashes, 1912
Estimation of Unsaturated Hydraulic Parameters from Infiltration and Internal Drainage Experiments, 1283
Knowledge and Data Integration for Modeling of Problems of Risk due to Natural and Man-Made Hazards, 2120
Performance of Penman-Monteith FAO56 in a Semiarid Highland Environment, 1282
Rank Correlation Method for Evaluating Manual Pavement Distress Data Variability, 1169

Databases

Action Research as a Proactive Research Method for Construction Engineering and Management, 323
Collection and Analysis of Critical Infrastructure Interdependency Relationships, 311
Estimation of Uncertainty in Long-Term Sewer Sediment Predictions Using a Response Database, 986
Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319
Using Soft Computing to Analyze Inspection Results for Bridge Evaluation and Management, 135
Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871
Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681

Datum

HTDP 3.0: Software for Coping with the Coordinate Changes Associated with Crustal Motion, 1776

Debris

Large Deformation Finite-Element Analysis of Submarine Landslide Interaction with Embedded Pipelines, 27
Mean Velocity of Mudflows and Debris Flows, 1012
Some Comments on the Protection of Lunar Habitats against Damage from Meteoroid Impacts, 48

Decision making

Attitude-Based Negotiation Methodology for the Management of Construction Disputes, 1328
Collection and Analysis of Critical Infrastructure Interdependency Relationships, 311
Critical Analysis of Different Hilbert-Huang Algorithms for Pavement Profile Evaluation, 309
Dual-Interval Fuzzy Stochastic Programming Method for Long-Term Planning of Municipal Solid Waste Management, 279
Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095
Efficacy of Using Support Vector Machine in a Contractor Prequalification Decision Model, 286
Efficiency Measurement of Bridge Maintenance Using Data Envelopment Analysis, 1165
Employing the Net Present Value-Consistent IRR Methods for PFI Contracts, 395
Evaluating Unplanned Stand-Alone Transportation Projects: Linking Incremental and Comprehensive Planning, 1952
Evaluation of Black-Start Schemes Employing Entropy Weight-Based Decision-Making Theory, 451
Excavation Game: Computer-Aided-Learning Tool for Teaching Construction Engineering Decision Making, 1600
Facility Maintenance Performance Perspective to Target Strategic Organizational Objectives, 1513
Feature Selection Using Stochastic Search: An Application to System Identification, 262
Hydrospatial Approach to Assist Decision Making on Reservoir Protection Zones, 1087
Improving Planning Reliability and Project Performance Using the Reliable Commitment Model, 426
Inspection, Condition Assessment, and Management Decisions for Commercial Roof Systems, 86
Integrated Schedule and Cost Model for Repetitive Construction Process, 1325
Integrating Location Models with Bayesian Analysis to Inform Decision Making, 1980

Integration of GIS and Data Mining Technology to Enhance the Pavement Management Decision Making, 1825
Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086
Leadership Flexibility Space, 1333
Methodology for Bayesian Belief Network Development to Facilitate Compliance with Water Quality Regulations, 1168
Modeling Blockage Failures in Sewer Systems to Support Maintenance Decision Making, 1559
Multicriteria Decision-Making Approach for Highway Slope Hazard Management, 1167
Multicriteria Group Decision-Making Technique for a Low-Class Road Maintenance Program, 1183
Rating Sustainability: Transportation Investments in Urban Corridors as a Case Study, 1937
REILP Approach for Uncertainty-Based Decision Making in Civil Engineering, 294
Selecting Appropriate Project Delivery System: Fuzzy Approach with Risk Analysis, 407
Traffic Modeling and College-Bus Routing Using Entropy Maximization, 1800

Decision support systems

Action Research as a Proactive Research Method for Construction Engineering and Management, 323
Bus-to-Depot Allocation: Models and Decision Support System, 1852
Computerized DSS for Construction Conflict Resolution under Uncertainty, 438
Dynamic Knowledge-Based Process Integration Portal for Collaborative Construction, 346
Entropic Risk Analysis by a High Level Decision Support System for Construction SMEs, 270
Feature Selection Using Stochastic Search: An Application to System Identification, 262
Frequency Analysis Incorporating a Decision Support System for Hydroclimatic Variables, 1143
Inspection, Condition Assessment, and Management Decisions for Commercial Roof Systems, 86
Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016
Neurofuzzy Decision Support System for Efficient Risk Allocation in Public-Private Partnership Infrastructure Projects, 310
River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977
River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978
Role of Simulation in Construction Engineering and Management, 427
Understanding and Managing Three-Dimensional/Four-Dimensional Model Implementations at the Project Team Level, 389

Decks

Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625
Effect of Fastener-Deck Strength on the Wind-Uplift Performance of Mechanically Attached Roofing Assemblies, 2131
Finite-Element Modeling of Short-Term Field Response of Composite Wood-Concrete Floors/Decks, 1677

Decomposition

Application of Riprap and Collar to Prevent Scouring around Rectangular Bridge Piers, 962
Catalytic Decomposition of CFC-12 over Solid Super Acid Mo_2O_3/ZrO_2, 770
Critical Analysis of Different Hilbert-Huang Algorithms for Pavement Profile Evaluation, 309
Decomposition and Effects of Pulse Components in Near-Field Ground Motions, 1675
Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition, 956
Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition
Large-Scale Nonlinear Conjunctive Use Optimization Problem: Decomposition Algorithm, 1964
Low-Dimensional Proper Orthogonal Decomposition Modeling as a Fast Approach of Aerodynamic Data Estimation, 43
Nonlinear Identification of Lumped-Mass Buildings Using Empirical Mode Decomposition and Incomplete Measurement, 486
Prediction of Long-Term Municipal Solid Waste Landfill Settlement Using Constitutive Model, 2110
Statistical Moments of Polynomial Dimensional Decomposition, 549
Water Use Intensities and the Composition of Production in Canada, 1965

Deep foundations

Behavior of Driven Ultrahigh-Performance Concrete H-Piles Subjected to Vertical and Lateral Loadings, 910
Current Design and Construction Practices of Bridge Pile Foundations with Emphasis on Implementation of LRFD, 166
Deep and Underground Excavations (GSP 206), 2232
Deep Foundations and Geotechnical In Situ Testing (GSP 205), 2233
Influence of Spatially Variable Side Friction on Single Drilled Shaft Resistance and LRFD Resistance Factors, 884
Reduction Factor for the Unloading Point Method at Clay Soil Sites, 837

Deep water

Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039
Nonhydrostatic Modeling of Nonlinear Deep-Water Wave Groups, 474

Defects

Inspection and Repair of Ceramic Tiling within a Building Management System, 1344
Machine Vision-Based Concrete Surface Quality Assessment, 335
Occupational Licensing of Building Trades: Case of Western Australia, 1603
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176

Deflection

Behavior of Step Tapered Bored Piles in Sand under Static Lateral Loading, 839
Bond Performance of GFRP Bars in Tension: Experimental Evaluation and Assessment of *ACI 440 Guidelines*, 242

Deflection Prediction for FRP-Strengthened Concrete Beams, 200
Estimating Subgrade Reaction Modulus for Transversely Isotropic Rock Medium, 880
Estimation of Remaining Service Life of Flexible Pavements from Surface Deflections, 1826
Finite-Element Model Approach to Determine Support Conditions and Effective Layout for Concrete Block Paving, 1471
Flexural Response of Concrete Beams Prestressed with AFRP Tendons: Numerical Investigation, 241
New Layer-Moduli Back-Calculation Method Based on the Constrained Extended Kalman Filter, 1790
Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256
Optimal Layout of Gill Cells for Very Large Floating Structures, 1697
Optimizing Structures Subject to Multiple Deflection Constraints and Load Cases Using the Principle of Virtual Work, 1748
Reliability Analysis of Buried Flexible Pipe-Soil Systems, 1565
Ring-Reinforced Pipelines: That Moment of Mystery, 1568
Seismic Performance Factors for Cold-Formed Steel Special Bolted Moment Frames, 1702
Semiempirical Approach for Estimation of DDC-Induced Deflections of Sheet Pile Walls in Peat, 1504
Utilizing Advanced Characterization Tools to Prevent Reflective Cracking, 1535
Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871

Deformation

Analysis of Soil Disturbance Associated with Mandrel-Driven Prefabricated Vertical Drains Using an Elliptical Cavity Expansion Theory, 17
Application of Shakedown Theory in Characterizing Traditional and Recycled Pavement Base Materials, 1813
Characterization of Rutting (Permanent Strain) Development of A-2-4 and A-4 Subgrade Soils under the HVS Loading, 1534
Closed-Form Solution of Axisymmetric Slender Elastic Toroidal Shells, 586
Comparison between Coupled and Uncoupled Consolidation Analysis of a Rigid Sphere in a Porous Elastic Infinite Space, 564
Comparison between Models of Rock Discontinuity Strength and Deformation, 858
Deformation and Cracking of Seepage Barriers in Dams due to Changes in the Pore Pressure Regime, 776
Deformation Detection in the GPS Real-Time Series by the Multiple Kalman Filters Model, 1785
Development of a Practical Method for the Estimation of Maximum Lateral Displacement in Large Landfills, 2099
Displacement Method for the Long-Term Analysis of Steel-Concrete Beams with Flexible Connection, 1633
Drained Deformation Behavior of Anisotropic Sands during Cyclic Rotation of Principal Stress Axes, 920
Effect of Bracing on Linear Free Vibration Characteristics of Thin-Walled Beams with Open Cross Section, 487
Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500
Evaluation of the Low-Cycle Fatigue Life in ASTM A706 and A615 Grade 60 Steel Reinforcing Bars, 1347
Field Assessment of the Performance of a Ballasted Rail Track with and without Geosynthetics, 863
Fully Coupled 10-Degree-of-Freedom Beam Theory for Piecewise Straight Thin-Walled Beams with General Quadrilateral Cross Sections, 1762
Geoenvironmental Engineering and Geotechnics (GSP 204), 2246
Increasing the Efficacy of the Conventional Deformation Analysis Methods: Alternative Strategy, 1773
Inelastic Plate Buckling, 571
Influence of Bracings on the Stability of Columns, 2154
Large Deformation Finite-Element Analysis of Submarine Landslide Interaction with Embedded Pipelines, 27
Load-History Effects on Deformation Capacity of Flexural Members Limited by Bar Buckling, 1606
Local Delamination Buckling of Laminated Composite Beams Using Novel Joint Deformation Models, 514
Method for Estimating the Deformability of Heavily Jointed Rock Masses, 896
Modeling Permanent Deformation of Unbound Granular Materials under Repeated Loads, 37
Nonlinear, Large Deformation Finite-Element Beam/Column Formulation for the Study of the Human Spine: Investigation of the Role of Muscle on Spine Stability, 591
Prediction of Permanent Deformations in Pavements Using a High-Cycle Accumulation Model, 845
Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593
Relationship between Molecular Compositions and Rheological Properties of Neat Asphalt Binder at Low and Intermediate Temperatures, 1490
Response of Spiral-Reinforced Lightweight Concrete to Short-Term Compression, 1491
Rotation- and Translation-Free Estimations of Symmetric, Rank-Two Tensors with a Case Study in LIDAR Surveying, 1768
Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718
Seismic Response and Fragility of Deteriorated Reinforced Concrete Bridges, 1733
Stability Analysis of Bay Bridge Saddle Configuration, 1764
Statistical Properties of Strain and Rotation Tensors in Geodetic Network, 1778
Structural Deformation Characteristics of Installed HDPE Circular Pipelines, 1821
Tensile Stiffness and Deformation Model of Rubber Isolators in Tension and Tension-Shear States, 501
Three-Dimensional Large Deformation Finite-Element Analysis of Plate Anchors in Uniform Clay, 808
Triaxial Deformation Behavior of Bituminous Mixes, 1353
Using Filtered and Semicontinuous High Rate GPS for Monitoring Deformations, 1775

Degradation

Anaerobic Biodegradation of Polyhydroxybutyrate in Municipal Sewage Sludge, 693

Assessment of Existing Structures Based on Identification, 1614

Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682

Decolorization and Mineralization of Remazol Red F3B by Fenton and Photo-Fenton Processes, 722

Degradation of Chlorobenzene in Water Using Nanoscale Cu Coupled with Microwave Irradiation, 658

Effect of Cocontaminants on the Remediation of PCB-Impacted Soils by Hydrogen Peroxide, 2127

Evaluation of UV LEDs Performance in Photochemical Oxidation of Phenol in the Presence of H_2O_2, 640

Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26

Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477

Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554

Mesomechanical Model for Numerical Study of Two-Dimensional Triaxially Braided Composite, 595

Numerical Study of the Effect of Verification Core Hole on the Point Bearing Capacity of Drilled Shafts, 900

Secondary Compression of Municipal Solid Wastes and a Compression Model for Predicting Settlement of Municipal Solid Waste Landfills, 843

Stiffness Degradation and Time to Cracking of Cover Concrete in Reinforced Concrete Structures Subject to Corrosion, 480

Delaminating

Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130

Interface Behavior of a Bimaterial Plate under Dynamic Loading, 579

Local Delamination Buckling of Laminated Composite Beams Using Novel Joint Deformation Models, 514

Delaware

Estimating Alongshore Sediment Transport and the Nodal Point Location on the Delaware–Maryland Coast, 2042

Delay time

Analysis of Adverse Weather for Excusable Delays, 439

Causes, Effects, Benefits, and Remedies of Change Orders on Public Construction Projects in Oman, 375

Causes of Delay in the Planning and Design Phases for Construction Projects, 84

Critical Concerns of Production Control System on Projects with Labor Constraints: Lessons from a Residential Case Study, 1332

Delay Correlation of Mechanical Hysteresis and Damping, 1613

Delay Function for Signalized Intersections in Traffic Assignment Models, 1924

Free and Secure Trade Commercial Vehicle Crossing Times at the Pacific Highway Port of Entry, 1889

Integrated Framework for Quantifying and Predicting Weather-Related Highway Construction Delays, 429

Demolition

Recycled Red-Clay Ceramic Construction and Demolition Waste for Mortars Production, 1366

Denitrification

Aerobic Methane Oxidation Coupled to Denitrification: Kinetics and Effect of Oxygen Supply, 632

Distribution of the Microbial Community Structure in Sulfur-Based Autotrophic Denitrification Columns, 666

Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713

Hydraulic Test of a Bioretention Media Carbon Amendment, 1109

Performance of Nitrogen-Removing Bioretention Systems for Control of Agricultural Runoff, 733

Simultaneous Desulfurization and Denitrification by Microwave Catalytic over FeCoCu/Zeolite 5A Catalyst, 768

Denmark

When the Cold Wind Blows: Legal Strategies against Ghettoization in Denmark, 1297

Density

Effect of Mixing Constituent toward Engineering Properties of POFA Cement-Based Aerated Concrete, 1372

Engineering Properties of Lunar Soil Simulant JSC-1A, 46

Influence of Gravel on the Compression Characteristics of Decomposed Granite Soil, 926

Density currents

Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987

Hydrodynamics of Secondary Settling Tanks and Increasing Their Performance Using Baffles, 612

Deposition

Deposition from Particle-Laden, Plane, Turbulent, Buoyant Jets, 5

Particle Fluxes into Permeable Sediments: Comparison of Mechanisms Mediating Deposition, 965

Depth

Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054

Design

Activity Awareness as an Enabler for Communication and Network Building in Construction Design Teams, 301

The Art of Science, 2172

Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051

Autogeneration of Simulation Network of the Design Process, 303

Automated Code Compliance Checking for Building Envelope Design, 280

Axial Load Capacity of Concrete-Filled FRP Tube Columns: Experimental versus Theoretical Predictions, 199

Ballistic Walking Design via Impulsive Control, 54

Bidirectional Seismic Behavior of Controlled Rocking Four-Legged Bridge Steel Truss Piers, 1754

Capacity Reduction and Fire Load Factors for Design of Steel Members Exposed to Fire, 1758

Causes of Delay in the Planning and Design Phases for Construction Projects, 84

Closed-Form Expression of the Response Time of an Open Channel, 1274
Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Design, 1644
Combined Effort, 2201
Combined Effort
Current Design and Construction Practices of Bridge Pile Foundations with Emphasis on Implementation of LRFD, 166
Design Aid for Water Quality Detention Basins, 1059
Design and Costs for Simple-Made-Continuous Rolled Steel Girder Bridges: Literature Survey, 2153
Design and Evaluation of Experimental Bridges in Tennessee, 1498
Design and Performance of a 46-m-High MSE Wall, 851
Design Criteria of Urban Drainage Infrastructures under Climate Change, 1979
Design Error Classification, Causation, and Prevention in Construction Engineering, 1536
Design Framework for Electrokinetically Enhanced Dewatering of Sludge, 659
Design of a Single-Pool Downstream Controller Using Quantitative Feedback Control Theory, 1275
Design Robustness of Local Water-Recycling Schemes, 2012
Developing and Teaching a Course in "Applied Sustainability and Public Health in Civil Engineering Design" at Queen's University, Kingston, Canada, 1601
Differences between Calculated and Measured Long-Term Deflections in a Prestressed Concrete Girder Bridge, 1557
Discharge Formulas for Subsurface Drainage of Retention Pond, 1223
Discrete Element Analysis of the Influences of Aggregate Properties and Internal Structure on Fracture in Asphalt Mixtures, 1341
Distribution Factors for Short-Haul Vehicular Loads on Prestressed Concrete Open Box Beam (U-Beam) Bridges, 2140
Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997
Emergence and Role of Cultural Boundary Spanners in Global Engineering Project Networks, 1329
Engineered Bamboo I-Joists, 1765
Estimation of Resilient Modulus of Subgrade Soils for Design of Pavement Structures, 1422
Evaluation of Subgrade Strength and Pavement Designs for Reliability, 1829
Experimental Studies of Reinforced Concrete Bridge Columns under Axial Load Plus Biaxial Bending, 1607
Factors Affecting Driver Speed Choice along Two-Lane Rural Highway Transition Zones, 1869
Footprint Design Manual for Local Roads, 2244
GeoFlorida 2010, 2247
Global Dimension of Robust Project Network Design, 358
Gray Clustering-Based Pavement Performance Evaluation, 1792
Hydraulic Geometry Relations for Stable Channel Design, 1142
Integral Abutment Bridges: The European Way, 2150
Interactive and Dynamic Integrated Module for Mobile Cranes Supporting System Design, 332
Iterative Formulas and Estimation Formulas for Computing Normal Depth of Horseshoe Cross-Section Tunnel, 1286
Least-Cost Design of Water Distribution Networks Including Fire Damages, 2026
Lessons Learned from a Design Competition for Structural Engineering Students: The Case of a Pedestrian Walkway at the Université de Sherbrooke, 1587
Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136
Methodology to Analyze Sun Glare Impact on Highway under Prolonged Exposure, 1910
Methodology to Analyze Sun Glare Related Safety Problems at Highway Tunnel Exits, 1846
Monitoring Design for Source Identification in Water Distribution Systems, 2024
Multimodal Feeder Network Design Problem: Ant Colony Optimization Approach, 1824
Multiobjective Optimization for Water Distribution System Design Using a Hyperheuristic, 2019
Multiple Linear Regression Model Approach for Aerosol Dispersion in Ventilated Spaces Using Computational Fluid Dynamics and Dimensional Analysis, 685
Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties, 12
New Yield Model for Wood Dowel Connections, 1731
Optimization of Water Distribution Network Design Using Differential Evolution, 1987
Overtopping Probability Constrained Optimal Design of Composite Channels Using Swarm Intelligence Technique, 1259
Parametric Solutions for Slide Impact on Pipelines, 866
Performance of Bridge Materials by Structural Deficiency Analysis, 1530
Ports 2010, 2270
Practical Solution Concepts for Planning and Designing Roadways, 1820
Probabilistic Analysis of Transient Design for Water Supply Systems, 2028
Proposed Loading Waveforms and Loading Time Equations for Mechanistic-Empirical Pavement Design and Analysis, 1843
Rapid Girder Selection and Cost Estimation for Simple-Made-Continuous Steel Bridge Design, 2158
Recommendations for Design of Reinforced Concrete Pipe, 1564
Reduced Modulus Action in U-Section Steel Sheet Pile Retaining Walls, 816
Relationship between Access Management and Other Physical Roadway Characteristics and Safety, 1804
Reliability-Constrained Optimization of Water Treatment Plant Design Using Genetic Algorithm, 647
Robust Design of Water Distribution Networks for a Proactive Risk Management, 1982
Rotation Compatibility Approach to Moment Redistribution for Design and Rating of Steel I-Girder Bridges, 99
Simple Method for the Design of Microirrigation Paired Laterals on Sloped Fields, 1230
Simple Plastic Model for Shear Critical SFRC Beams, 1647
The Story of World Record Spans, 2171

Structural Reliability of Prestressed UHPC Flexure Models for Bridge Girders, 100
Supporting the Winds of Change, 2205
Trenchless Renewal of Culverts and Storm Sewers, 2291
Two-Dimensional LDV Measurement, Modeling, and Optimal Design of Rectangular Primary Settling Tanks, 669
Unified Element and Section Approach to Design of Cold-Formed Steel Structures, 1642
Weaving Section Flow Model at the Weaving Area of Malaysian Conventional Roundabout, 1872

Design/build

Owners Respond: Preferences for Task Performance, Delivery Systems, and Quality Management, 343
Partnering Process Model for Public-Sector Fast-Track Design-Build Projects in Korea, 1319
Project Administration for Design-Build Contract, 2272
Quantitative Methods for Design-Build Team Selection, 405
Tolerance and Constructability of Soldier Piles in Slurry Walls, 1507
Worth the Wait, 2213

Detention basins

Design Aid for Water Quality Detention Basins, 1059
Hydraulic Model for Sedimentation in Storm-Water Detention Basins, 672
Pinning Force during Closure Process at Blocked Pipe Entrance, 1215
Preservation of Watershed Regime for Low-Impact Development through Detention, 1056

Deterioration

AC Pipe in North America: Inventory, Breakage, and Working Environments, 1581
Aging Considerations in the Development of Time-Dependent Seismic Fragility Curves, 1753
Artificial Neural Network Model of Bridge Deterioration, 1556
Deterioration Forecasting Model with Multistage Weibull Hazard Functions, 1192
Deterioration Rates of Typical Bridge Elements in New York, 134
Detrimental Effects on Coastal Concrete Structures by *Chaetomorpha Antennina*, 1440
Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194
Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130
Experimental Estimation of the Relative Deterioration of Surface Maintenance Treatments, 1788
Extending the Service Life of Electric Distribution and Transmission Wooden Poles Using a Wet Layup FRP Composite Strengthening System, 1537
Hydraulic Deterioration Models for Storm-Water Drainage Pipes: Ordered Probit versus Probabilistic Neural Network, 275
Identifying Critical Sources of Bridge Deterioration in Cold Regions through the Constructed Bridges in North Dakota, 146
Markov and Neural Network Models for Prediction of Structural Deterioration of Storm-Water Pipe Assets, 1180
Novel Approach for Multicriteria Optimization of Life-Cycle Preventive and Essential Maintenance of Deteriorating Structures, 1707
Performance of Bridge Materials by Structural Deficiency Analysis, 1530
Reliability-Based Modeling of Bridge Deterioration Hazards, 158
Road Roughness and Whole Body Vibration: Evaluation Tools and Comfort Limits, 1876
Roughness Model Accounting for Heterogeneity Based on In-Service Pavement Performance Data, 1812
Strength Deterioration of Plain and Metakaolin Concretes in Aggressive Sulfate Environments, 1385
Time-Dependent Risk Assessment of Combined Overtopping and Structural Failure for Reinforced Concrete Coastal Structures, 2038
Using Soft Computing to Analyze Inspection Results for Bridge Evaluation and Management, 135

Developing countries

Arsenic and Fluoride Removal Using Simple Materials, 655
Health and Safety Management within Small- and Medium-Sized Enterprises (SMEs) in Developing Countries: Study of Contextual Influences, 424
Mechanisms for Transportation Infrastructure Investment in Developing Countries, 1927
Modeling Destination Choice Behavior Incorporating Spatial Factors, Individual Sociodemographics, and Travel Mode, 1874
Space Development Modeling of Urban Regions in Developing Countries, 1925
Sustainable Wastewater Management in Developing Countries, 2286
Web-Based Advanced Traveler Information System for Developing Countries, 1878

Dewatering

Design Framework for Electrokinetically Enhanced Dewatering of Sludge, 659
Effect of Pore-Size Distribution on Shrinkage of Concretes, 1399
Evaporation, Unsaturated Flow, and Salt Accumulation in Multilayer Deposits of "Paste" Gold Tailings, 939
Experimental Investigation of the Influence of Moisture on the Bond Behavior of FRP to Concrete Interfaces, 258
Numerical Study of the Effect of Verification Core Hole on the Point Bearing Capacity of Drilled Shafts, 900
Rheological Characterization of Sludges during Belt Filtration Dewatering Using an Immobilization Cell, 721
Shear Strength Equations for Unsaturated Soil under Drying and Wetting, 832
SSPRSD Using a Filamentous Fungal Strain *Penicillium expansum BS30* Isolated from Wastewater Sludge, 694
Strength Deterioration of Plain and Metakaolin Concretes in Aggressive Sulfate Environments, 1385

Diagnosis

Determination of the Transverse Resistance Characteristics in Railway Track, 1902
Inspection and Repair of Ceramic Tiling within a Building Management System, 1344
Nondestructive Investigation of Wet Building Material: Multimethodical Approach, 1543

Predictive and Diagnostic Load Rating Model of a Prestressed Concrete Bridge, 132

Diaphragm wall

Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838

Diaphragms

Effect of Intermediate Diaphragms on Decked Bulb-Tee Bridge System for Accelerated Construction, 162

Experimental Study on Full-Scale Light Frame Wood House under Lateral Load, 1687

Differential equations

Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536

Weighted Residual Numerical Differentiation Algorithm Applied to Experimental Bending Moment Data, 857

Differential settlement

Experimental Study on Flexural Testing of Compacted Soil Beams, 1392

Forensic Investigations to Evaluate Sulfate-Induced Heave Attack on a Tunnel Shotcrete Liner, 1446

Interplanar and Intraplanar Differential Settlement Analyses of Boiler Supporting Structure: Comparative Study, 2138

Diffraction

Influence of Surface Condition on the Inspection of Steel Bridge Elements Using the Time-of-Flight Diffraction Method, 157

Diffusion

Analytical Solutions for Contaminant Diffusion in Double-Layered Porous Media, 923

Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

Diffusive Transport of VOCs through LLDPE and Two Coextruded Geomembranes, 889

Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials, 1407

Service Life Prediction for Concrete Structures by Time-Depth Dependent Chloride Diffusion Coefficient, 1477

Digital techniques

Detection of Terrain Morphologic Features Using GPS, TLS, and Land Surveys: "Tana della Volpe" Blind Valley Case Study, 1782

Evaluation of Methods for Representing Urban Terrain in Storm-Water Modeling, 1055

Front and Side View Image Correlation Measurements on FRP to Concrete Pull-Off Bond Tests, 222

Modern Determination of Vertical Deflections Using Digital Zenith Cameras, 1766

Object Recognition in Construction-Site Images Using 3D CAD-Based Filtering, 267

Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176

Two Methods to Estimate the Spot Size of Terrestrial Laser Scanners, 1781

Dikes

Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309

Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086

Dilatancy

Behavior of a Compacted Completely Decomposed Granite Soil from Suction Controlled Direct Shear Tests, 791

Dilatancy and Shear Strength of Sand at Low Confining Pressures, 825

Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials, 518

Modeling Stress-Dilatancy for Sand under Compression and Extension Loading Conditions, 535

Sediment Entrainment at High Flow Velocity, 1001

Dimensional analysis

Dimensional Analysis of the Earthquake Response of a Pounding Oscillator, 489

Dimensional Response Analysis of Multistory Regular Steel MRF Subjected to Pulselike Earthquake Ground Motions, 1698

Discharge Coefficient for a Water Flow through a Bottom Orifice of a Conical Hopper, 1264

Generalized Method for Storm-Water Pumping Station Design, 1146

Multiple Linear Regression Model Approach for Aerosol Dispersion in Ventilated Spaces Using Computational Fluid Dynamics and Dimensional Analysis, 685

Thermal Scale Modeling by FEM and Test, 41

Disaster recovery

Building Community Disaster Preparedness with Volunteers: Community Emergency Response Teams in Illinois, 2090

Energy Infrastructure Damage Analysis for Hurricane Rita, 2088

Energy Supply System Performance for Hurricane Katrina, 457

Maximizing the Sustainability of Integrated Housing Recovery Efforts, 393

Optimizing Resource Utilization during the Recovery of Civil Infrastructure Systems, 1339

Disasters

Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289

Obstacles and Disaster Risk Reduction: Survey of Memphis Organizations, 2089

Discharge measurement

Channel Bed Slope Effect on the Height of Gravity Waves Produced by a Sudden Downstream Discharge Stoppage, 976

Hydraulic Relations for Clinging Flow of Sharp-Crested Weir, 984

Discrete elements

Adaptive Harmony Search Method for Structural Optimization, 1650

Algorithm to Generate a Discrete Element Specimen with Predefined Properties, 20

CFD Analysis of Turbulent Natural Ventilation in Double-Skin Façade: Thermal Mass and Energy Efficiency, 454

Discrete Element Analysis of the Influences of Aggregate Properties and Internal Structure on Fracture in Asphalt Mixtures, 1341

Discrete Element Modeling of Strength Properties of Johnson Space Center (JSC-1A) Lunar Regolith Simulant, 57

Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26

Micromechanical Aspects of Liquefaction-Induced Lateral Spreading, 32

Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials, 518

Progressive Collapse Mechanisms of Brittle and Ductile Framed Structures, 556

Disinfection

Model to Quantify Removal and Inactivation of Microorganisms Occluded in Effluent Wastewater Particles Using Filtration and Disinfection Systems, 739

Release and Removal of Microcystins from *Microcystis* during Oxidative-, Physical-, and UV-Based Disinfection, 609

Dispersion

Dimensionless Method to Characterize the Mixing Effects of Surcharged Manholes, 975

Effects of the Source on Wave Propagation in Pile Integrity Testing, 892

Particle Fluxes into Permeable Sediments: Comparison of Mechanisms Mediating Deposition, 965

Displacement

Characterization of Cementitiously Stabilized Granular Materials for Pavement Design Using Unconfined Compression and IDT Testings with Internal Displacement Measurements, 1396

Comparison between Models of Rock Discontinuity Strength and Deformation, 858

Critical Assessment of Interstory Drift Measurements, 1760

Design and Performance of a 46-m-High MSE Wall, 851

Development of a Practical Method for the Estimation of Maximum Lateral Displacement in Large Landfills, 2099

Dimensional Response Analysis of Multistory Regular Steel MRF Subjected to Pulselike Earthquake Ground Motions, 1698

Displacement Method for the Long-Term Analysis of Steel-Concrete Beams with Flexible Connection, 1633

Estimation of Maximum Roof Displacement Demands in Regular Multistory Buildings, 459

Evaluation of Lateral Interpretation Criteria for Drilled Shaft Capacity, 885

Extension of the Touratier Kinematic Model to Large Strains, Displacements, and Rotations, 587

Groundwater Modeling for the Analysis of Active Slow-Moving Landslides, 894

High Displacement Glass Seismic Systems, 2146

Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932

Median-Based Estimates and Their Application in Controlling Reference Mark Stability, 1772

Model Development and Validation for Intelligent Data Collection for Lateral Spread Displacements, 304

Modeling Residual Displacements of Concrete Bridge Columns under Earthquake Loads Using Fiber Elements, 117

Performance-Based Procedure for Direct Displacement Design of Engineered Wood-Frame Structures, 1704

Probabilistic Performance-Based Procedure to Evaluate Pile Foundations at Sites with Liquefaction-Induced Lateral Displacement, 819

Seismic Displacement of Slopes Reinforced with Piles, 860

Seismic Rotational Displacements of Gravity Walls by Pseudodynamic Method with Curved Rupture Surface, 21

Seismic Rotational Stability of Waterfront Retaining Wall Using Pseudodynamic Method, 16

Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838

Shaking Table Model Tests on Pile Groups behind Quay Walls Subjected to Lateral Spreading, 820

Shear Band Formation Observed in Ring Shear Tests on Sandy Soils, 809

Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714

Simplified Direct Displacement Design of Six-Story Woodframe Building and Pretest Seismic Performance Assessment, 1688

Three-Dimensional Structural Translation and Rotation Measurement Using Monocular Videogrammetry, 540

Dispute resolution

Analysis of Dispute Review Boards Application in U.S. Construction Projects from 1975 to 2007, 1324

Case for Expanding the Claim Dispute Resolution Training of TxDOT Personnel, 1314

Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309

Considering Attitudes in Strategic Negotiation over Brownfield Disputes, 1315

Construction Mediation Landscape in the Civil Justice System in Hong Kong, 1308

Exploring the Potential for Predicting Project Dispute Resolution Satisfaction Using Logistic Regression, 365

Hybrid Model Incorporating Real Options with Process Centric and System Dynamics Modeling to Assess Value of Investments in Alternative Dispute Resolution Techniques, 300

Impact of the EU Mediation Directive on the German Construction Sector, 1307

Judging Unreasonable Litigation Behavior at the Interface of Mediation in the English Jurisdiction, 1306

Multiagent System for Construction Dispute Resolution (MAS-COR), 345

Predicting the Outcome of Construction Litigation Using an Integrated Artificial Intelligence Model, 269

Study of Real Options with Exogenous Competitive Entry to Analyze Dispute Resolution Ladder Investments in Architecture, Engineering, and Construction Projects, 352

Dissolved oxygen

Evaluation of the Advection Scheme in the HSPF Model, 1075

Influence of Physical Forcing on Bottom-Water Dissolved Oxygen within Caloosahatchee River Estuary, Florida, 725

Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717

Water Quality Modeling of a Hypoxic Stream, 2107

Distance measurement
Evaluation of the Credibility of Reflectorless Distance Measurement, 1786

Distribution functions
Alternating Direction Implicit Method-Based Nonlinear Filtering for Relative Orbit Estimation, 60

District of Columbia
Cabin John Bridge: Role of Alfred L. Rives, C.E., 1514
Capitol Connections, 2189
Immigration and Construction: Analysis of the Impact of Immigration on Construction Project Costs, 1334

Diversion structures
Case Study: Movable Bed Model Scaling for Bed Load Sediment Exclusion at Intake Structure on Rio Grande, 968

Documentation
Automatic Extraction of Apparent Semantic Structure from Text Contents of a Structural Calculation Document, 290
Design Error Classification, Causation, and Prevention in Construction Engineering, 1536
Revisiting the Strengths and Limitations of Regulatory Contracts in Infrastructure Industries, 1197

Domestic wastes
Emerging Contaminants of Environmental Concern: Source, Transport, Fate, and Treatment, 2096

Doppler systems
Subcritical Contraction for Improved Open-Channel Flow Measurement Accuracy with an Upward-Looking ADVM, 1269
Two-Dimensional LDV Measurement, Modeling, and Optimal Design of Rectangular Primary Settling Tanks, 669

Dowels
New Yield Model for Wood Dowel Connections, 1731
Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. I: NDS Design Equations, 1482
Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. II: Fracture Mechanics Equations, 1483

Drag
Accelerometer-Based Force Balance for High Enthalpy Facilities, 68
Experimental Study of Particle Motion on a Smooth Bed under Shoaling Waves Using Particle Image Velocimetry, 543
Hydrodynamic Forces Generated on a Spherical Sediment Particle during Entrainment, 1019
Turbulent Flow through Idealized Emergent Vegetation, 1048

Drainage
Adsorptive Removal of Parts per Million Level Selenate Using Iron-Coated GAC Adsorbents, 731
Analysis of Soil Disturbance Associated with Mandrel-Driven Prefabricated Vertical Drains Using an Elliptical Cavity Expansion Theory, 17
Beneficial Use of Shredded Tires as Drainage Material in Cover Systems for Abandoned Landfills, 2100
Data Analysis Techniques for GPR Used for Assessing Railroad Ballast in High Radio-Frequency Environment, 1830
Design Criteria of Urban Drainage Infrastructures under Climate Change, 1979
Effect of Watershed Subdivision on SWAT Modeling with Consideration of Parameter Uncertainty, 1161
Estimation of Unsaturated Hydraulic Parameters from Infiltration and Internal Drainage Experiments, 1283
Feasibility of Using Coal Fly Ash for Mine Waste Containment, 690
Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221
Graphical Solutions for Hillslopes: Discharge, Head, and Velocity Diagrams, 1263
Investigation of Flow through Orifices in Riser Pipes, 1238
Iterative Formulas and Estimation Formulas for Computing Normal Depth of Horseshoe Cross-Section Tunnel, 1286
Low Flow Scaling with Respect to Drainage Area and Precipitation in Northern Iran, 1077
Low Impact Development 2010, 2262
Modeling Controlled Water Systems, 1244
Multiobjective Evolutionary Approach to Rehabilitation of Urban Drainage Systems, 2014
Numerical Simulations of Efficiency of Curb-Opening Inlets, 948
Remarks on Camp's Criterion for Self-Cleansing Storm Sewers, 1216
Short-Duration Rainfall Intensity Equations for Urban Drainage Design, 1257
Smear Effect and Well Resistance of PVD-Installed Ground Based on the Hyperbolic Method, 836
Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232
Water Table Fluctuation in the Presence of a Time-Varying Exponential Recharge and Depth-Dependent ET in a Two-Dimensional Aquifer System with an Inclined Base, 1255

Drawdown, hydrology
Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231

Dredging
Experimental Evaluation of Strength Characteristics of Stabilized Dredged Soil, 1401
Incorporation of Air Emissions in Dredging Method Selection, 2046
Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913
Sediment Entrainment at High Flow Velocity, 1001
Stabilized Dredged Material. I: Parametric Study, 875
Stabilized Dredged Material. II: Geomechanical Behavior, 876
Stabilized Dredged Material. III: Mineralogical Perspective, 877

Drift
Critical Assessment of Interstory Drift Measurements, 1760
Dimensional Response Analysis of Multistory Regular Steel MRF Subjected to Pulselike Earthquake Ground Motions, 1698
Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734
Seismic Behavior of Reinforced Concrete Exterior Wide Beam-Column Joints, 1608

Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714

Snow Loads, 2278

Drilled shafts

Art of Foundation Engineering Practice (GSP 198), 2226

Effect of Construction Induced Vibrations on Green Concrete in Drilled Shafts, 1412

Estimating Subgrade Reaction Modulus for Transversely Isotropic Rock Medium, 880

Evaluation of Lateral Interpretation Criteria for Drilled Shaft Capacity, 885

Field Behavior of an Integral Abutment Bridge Supported on Drilled Shafts, 95

Influence of Spatially Variable Side Friction on Single Drilled Shaft Resistance and LRFD Resistance Factors, 884

Numerical Study of an Integral Abutment Bridge Supported on Drilled Shafts, 96

Numerical Study of the Effect of Verification Core Hole on the Point Bearing Capacity of Drilled Shafts, 900

Relationship between Texas Cone Penetrometer Tests and Axial Resistances of Drilled Shafts Socketed in Clay Shale and Limestone, 888

Drilling

Drilling Under DFW, 2193

Parametric Dependency and Trends of HDD Pull Loads, 1569

Risk Evaluation for Maxi Horizontal Directional Drilling Crossing Projects, 1572

Drinking water

Adsorption Mechanism of Arsenate on Crystal γ-Fe_2O_3 Nanoparticles, 712

Adsorption of As(V) from Water Using Nanomagnetite, 656

Advances in Modeling Completely Mixed Flow Reactors for Ion Exchange, 736

Arsenic and Fluoride Removal Using Simple Materials, 655

Design of Pumped Water Distribution Networks with Storage, 1971

Linear Algebra and Minimum Relative Entropy to Investigate Contamination Events in Drinking Water Systems, 2007

Methodology for Bayesian Belief Network Development to Facilitate Compliance with Water Quality Regulations, 1168

Modeling the Removal of Arsenic by Iron Oxide Coated Sand, 636

Natural Organic Matter Removal by Adsorption onto Carbonaceous Nanoparticles and Coagulation, 729

Planning Unidirectional Flushing Operations as a Response to Drinking Water Distribution System Contamination, 2025

Preserving Our Water Resources, 2162

Release and Removal of Microcystins from *Microcystis* during Oxidative-, Physical-, and UV-Based Disinfection, 609

Review of Sensor Placement Strategies for Contamination Warning Systems in Drinking Water Distribution Systems, 2021

Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size, 771

Driven piles

Art of Foundation Engineering Practice (GSP 198), 2226

Behavior of Driven Ultrahigh-Performance Concrete H-Piles Subjected to Vertical and Lateral Loadings, 910

Driver behavior

Differences in Off-Road Glances: Effects on Young Drivers' Performance, 1831

Factors Affecting Driver Speed Choice along Two-Lane Rural Highway Transition Zones, 1869

Investigating the Impacts of Green Signal Countdown Devices: Empirical Approach and Case Study in China, 1901

Methodology to Analyze Sun Glare Impact on Highway under Prolonged Exposure, 1910

Older Drivers' Perception and Acceptance of In-Vehicle Devices for Traffic Safety and Traffic Efficiency, 1838

Perceived Level of Service, Driver, and Traffic Characteristics: Piecewise Linear Model, 1884

Drop structures

Effect of Flood Recession on Scouring at Bed Sills, 964

Droughts

Applying Multiobjective Genetic Algorithm to Analyze the Conflict among Different Water Use Sectors during Drought Period, 2013

Drought Analysis Using Trivariate Copulas Conditional on Climatic States, 1070

Frequency Distribution of Extreme Hydrologic Drought of Southeastern Semiarid Region, Iran, 1083

Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224

Regional Bivariate Frequency Analysis of Meteorological Droughts, 1154

Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220

Statistical Modeling of the Monthly Palmer Drought Severity Index, 1135

Upper Green River Basin (United States) Streamflow Reconstructions, 1113

Ductility

Active Confinement of Reinforced Concrete Bridge Columns Using Shape Memory Alloys, 102

Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674

Analysis of Moment Redistribution in Fiber-Reinforced Polymer Plated RC Beams, 219

Analytical Model for Circular Normal- and High-Strength Concrete Columns Confined with FRP, 233

Calibration of the SMCS Criterion for Ductile Fracture in Steels: Specimen Size Dependence and Parameter Assessment, 598

Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751

Confinement Effectiveness of FRP in Retrofitting Circular Concrete Columns under Simulated Seismic Load, 230

Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625

Effect of Severe Environmental Exposures on CFRP Wrapped Concrete Columns, 184

Experimental Study of Normal- and High-Strength Concrete Confined with Fiber-Reinforced Polymers, 232

Experimental Study of Rectangular RC Columns Strengthened with CFRP Composites under Eccentric Loading, 221

Impact of Different Earthquake Types on the Statistics of Ductility Demand, 1684

Load-History Effects on Deformation Capacity of Flexural Members Limited by Bar Buckling, 1606

Moment-Rotation Response of Slender Steel I-Girders, 1756

Reduced Link Sections for Improving the Ductility of Eccentrically Braced Frame Link-to-Column Connections, 1662

Relationship between Molecular Compositions and Rheological Properties of Neat Asphalt Binder at Low and Intermediate Temperatures, 1490

Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238

Seismic Performance Parameters for Reinforced Concrete-Block Shear Wall Construction, 1495

Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714

Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761

Truss Modeling of Concrete Columns in Compression, 558

Ducts

Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116

Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451

Durability

Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865

Apparatus for Testing the Combined Effects of Deformation and Chemical Exposure on Polymeric Liners, 1365

Carbonation Curing of Slag-Cement Concrete for Binding CO_2 and Improving Performance, 1373

Determination of the Main Parameters of Alkali Silica Reaction Using System Identification Method, 1441

Durability of Wet Bond of Hybrid Laminates to Cast-in-Place Concrete, 196

Effect of Severe Environmental Exposures on CFRP Wrapped Concrete Columns, 184

Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128

Fresh, Mechanical, and Durability Characteristics of Self-Consolidating Concrete Incorporating Volcanic Ash, 1414

Investigating the Alkali-Silica Reaction of Recycled Glass Aggregates in Concrete Materials, 1480

Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525

Performance of a Stabilized Aggregate Base Subject to Different Durability Procedures, 1397

Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213

Probabilistic Assessment of Concrete Structure Durability under Reinforcement Corrosion Attack, 1553

Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451

Proposed Behavioral Model for Deicer Scaling Resistance of Slag Cement Concrete, 1380

Selection of Durable Closure Pour Materials for Accelerated Bridge Construction, 160

Service Life Prediction for Concrete Structures by Time-Depth Dependent Chloride Diffusion Coefficient, 1477

Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212

Time-Dependent Reliability Analysis of FRP Rehabilitated Pipes, 203

Wet Lay-Up Manufactured FRPs for Concrete and Masonry Repair: Influence of Water on the Properties of Composites and on Their Epoxy Components, 257

Dust

Case Study to Identify Barriers and Incentives to Implementing an Engineering Control for Concrete Grinding Dust, 437

Investigation of Laboratory Procedure for Evaluating Chemical Dust Palliative Performance, 1472

Dyes

Biosorptive Color Removal: Applicability of Equilibrium Isotherm Models, 2098

Decolorization and Mineralization of Remazol Red F3B by Fenton and Photo-Fenton Processes, 722

Development of a Kinetic Model for the Biosorption of Cationic Dyes by Dead Macrofungi, 667

Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123

Photocatalytic Degradation of Orange II in Aqueous Iron-Rich Montmorillonite Solutions, 626

Textile Dye Removal in Single-Phase and Two-Phase Anaerobic Biotreatment Systems, 2125

Dynamic analysis

Dynamic Analysis of Gap Closing and Contact in the Mixed Lagrangian Framework: Toward Progressive Collapse Prediction, 555

Finite-Element Simulations of Full-Scale Modular-Block Reinforced Soil Retaining Walls under Earthquake Loading, 523

Mixed Finite Element for Three-Dimensional Nonlinear Dynamic Analysis of Rectangular Concrete-Filled Steel Tube Beam-Columns, 592

Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685

Parallel Axial-Flexural Hinge Model for Nonlinear Dynamic Progressive Collapse Analysis of Welded Steel Moment Frames, 1623

Dynamic loads

Design of Dynamically Wind-Loaded Helical Piers for Small Wind Turbines, 1538

Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713

Effect of Hanger Flexibility on Dynamic Response of Suspension Bridges, 602

Evaluation of the Effect of Pavement Roughness on Skid Resistance, 1857

Interface Behavior of a Bimaterial Plate under Dynamic Loading, 579
Loads on Track, Ballast Fouling, and Life Cycle under Dynamic Loading in Railways, 1904
Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672
Sensitivity of Model Parameter on Dynamic Behavior Simulation of HPC, 1485
Stability Analysis of Direct Integration Algorithms Applied to MDOF Nonlinear Structural Dynamics, 508

Dynamic models
Comparison of Spatial Interpolation Methods for Water Quality Evaluation in the Chesapeake Bay, 627
Dynamic Model of an Astronaut Equipped with a Manned Maneuvering Unit in Virtual Reality, 55
Empirical Modeling Methodologies for Construction, 318
Morphology and Substrate Control on the Dynamics of Flowlike Landslides, 810

Dynamic properties
Shear Strength of Municipal Solid Waste, 10

Dynamic response
Delay Correlation of Mechanical Hysteresis and Damping, 1613
Effect of Wall Flexibility on Dynamic Response of Concrete Rectangular Liquid Storage Tanks under Horizontal and Vertical Ground Motions, 1652
Experimental Studies of Reinforced Concrete Bridge Columns under Axial Load Plus Biaxial Bending, 1607
Finite-Element Analysis of Fluid-Structure Interaction in a Blast-Resistant Window System, 1636
Frequency Spectrum Analysis of Impact-Echo Waveforms for T-Beams, 161
Increased Lateral Abutment Resistance from Gravel Backfills of Limited Width, 795
Nonlinear Dynamic Response of Piles under Horizontal Excitation, 929
Prediction of Extreme Response Statistics of Narrow-Band Random Vibrations, 488
Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

Dynamic stability
Dynamic Instability of Nanorods/Nanotubes Subjected to an End Follower Force, 563
On a Possible Role of Rayleigh Surface Waves in Dynamic Slope Failures, 28

Dynamic tests
Dynamic Analysis of a Composite Cable-Stayed Bridge: Escaleritas Viaduct, 156
Dynamic Identification of a Concrete Bridge with Orthotropic Plate-Type Deck, 1666
Effect of Fastener-Deck Strength on the Wind-Uplift Performance of Mechanically Attached Roofing Assemblies, 2131
Linearly Implicit Time Integration Methods for Real-Time Dynamic Substructure Testing, 596
Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685
Vibration Serviceability of a Building Floor Structure. I: Dynamic Testing and Computer Modeling, 1546

Dynamics
Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. I: Theory, 1864
Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. II: Applications, 1865
Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572

Earth pressure
Can Soil Arching Be Insensitive to ϕ?, 24
Effects of Strain Localization on Seismic Active Earth Pressures, 873
Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517
Field Behavior of an Integral Abutment Bridge Supported on Drilled Shafts, 95
Field Tests on Pile-Supported Embankments over Soft Ground, 850
Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932
Numerical Study of an Integral Abutment Bridge Supported on Drilled Shafts, 96
Optimum Design of Bridge Abutments under Seismic Conditions: Reliability-Based Approach, 112
Resultant Force of Lateral Earth Pressure in Unstable Slopes, 934
Seismic Earth Pressures on Cantilever Retaining Structures, 903
Seismic Rotational Displacements of Gravity Walls by Pseudodynamic Method with Curved Rupture Surface, 21
Structural Behavior of a Pile-Supported Embankment, 777
Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills, 123

Earthquake engineering
Capacity Design of Intermediate Horizontal Boundary Elements of Steel Plate Shear Walls, 1673
Dimensional Analysis of the Earthquake Response of a Pounding Oscillator, 489
Learning from Construction Failures due to the 2009 L'Aquila, Italy, Earthquake, 1550
Model Development and Validation for Intelligent Data Collection for Lateral Spread Displacements, 304
Practical Formulas for Frequency Domain Analysis of Earthquake-Induced Dam-Reservoir Interaction, 470
Simplified Direct Displacement Design of Six-Story Woodframe Building and Pretest Seismic Performance Assessment, 1688
Soil Dynamics and Earthquake Engineering (GSP 201), 2281

Earthquake loads
Compression Performance of Steel Pipelines with Welded Slip Joints, 1561
Finite-Element Simulations of Full-Scale Modular-Block Reinforced Soil Retaining Walls under Earthquake Loading, 523
Modeling Residual Displacements of Concrete Bridge Columns under Earthquake Loads Using Fiber Elements, 117
Optimum Design of Bridge Abutments under Seismic Conditions: Reliability-Based Approach, 112

Earthquake resistant structures

Improved Decentralized Method for Control of Building Structures under Seismic Excitation, 524

Seismic Design of Flexible Cantilevered Retaining Walls, 807

Earthquakes

Acceleration Tracking Performance of the UCSD-NEES Shake Table, 1656

Assessment of Mortar and Brick Strength in Earthquake-Affected Structures in Peru Using a Schmidt Hammer, 1560

Behavior of Bidirectional Spring Unit in Isolated Floor Systems, 1700

Building Capacity through Collaborative Local Action: Case of Matra REGIMA within Zeytinburnu Regeneration Scheme, 1936

Centrifuge Testing to Evaluate and Mitigate Liquefaction-Induced Building Settlement Mechanisms, 864

Comparative Assessment of Civil Infrastructure Network Performance under Probabilistic and Scenario Earthquakes, 1162

Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708

Dimensional Response Analysis of Multistory Regular Steel MRF Subjected to Pulselike Earthquake Ground Motions, 1698

Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578

Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095

Earthquake Simulator Testing and Seismic Evaluation of Suspended Ceilings, 82

Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657

Estimating the Social and Economic Consequences of Natural Hazards: Fiscal Impact Example, 2083

Experimental Seismic Response of a Full-Scale Six-Story Light-Frame Wood Building, 1732

Finite-Element Modeling of Nonlinear Behavior of Masonry-Infilled RC Frames, 1635

Highway Network Retrofit under Seismic Hazard, 1182

Impact of Different Earthquake Types on the Statistics of Ductility Demand, 1684

Influence of Input Motion and Site Property Variabilities on Seismic Site Response Analysis, 833

Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734

Kashiwazaki, Japan, Earthquake of July 16, 2007, 2261

Lateral Spreading Forces on Bridge Piers and Pile Caps in Laterally Spreading Soil: Effect of Angle of Incidence, 928

Mechanisms of Seismically Induced Settlement of Buildings with Shallow Foundations on Liquefiable Soil, 788

Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844

Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852

Pisco, Peru, Earthquake of August 15, 2007, 2269

Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905

Probabilistic Performance-Based Procedure to Evaluate Pile Foundations at Sites with Liquefaction-Induced Lateral Displacement, 819

Recommendations for Seismic Design of Hybrid Coupled Wall Systems, 2273

Safety of Structures in Strong Winds and Earthquakes: Multihazard Considerations, 1640

Seismic Damage Estimation for Buried Pipelines: Challenges after Three Decades of Progress, 1563

Seismic Earth Pressures on Cantilever Retaining Structures, 903

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. I: Bridge Modeling, Parametric Analysis, and Retrofit Design, 137

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. II: Fragility Analysis, Fragility Curves, and Fragility Surfaces, 138

Simplified Approximation Procedure for Performance-Based Evaluation of Liquefaction Potential, 787

Structural System Parameter Selection Based on Collapse Potential of Buildings in Earthquakes, 1699

Three-Dimensional Seismic Response of a Full-Scale Light-Frame Wood Building: Numerical Study, 1611

Time-Domain Hydrodynamic Forces on Rigid Dams with Reservoir Bottom Absorption of Energy, 585

Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills, 123

Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789

Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Water Well Resonance Induced by Preearthquake Signals, 575

Earthwork

Anisotropy in the Spatial Distribution of Roller-Measured Soil Stiffness, 25

Geostatistical Analysis for Spatially Referenced Roller-Integrated Compaction Measurements, 853

Eccentric loads

Experimental Study of Eccentrically Loaded Raft with Connected and Unconnected Short Piles, 909

Experimental Study of Rectangular RC Columns Strengthened with CFRP Composites under Eccentric Loading, 221

Slenderness Effects on Circular CFRP Confined Reinforced Concrete Columns, 204

Economic factors

Considering Carbon Capture and Storage for Energy Generation from Municipal Solid Waste, 698

Disposal of Arsenic-Laden Adsorptive Media: Economic Analysis for California, 730

Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975

Economics and Finance for Engineers and Planners, 2238

Engineering Leadership and Management during Financial Crisis, 2062

Estimating the Social and Economic Consequences of Natural Hazards: Fiscal Impact Example, 2083

Factors Affecting Participation in Spot and Options Markets for Water, 2004

Global Economic Forces' Effect upon Urban Planning: Greater Amman Case Study, 1930
History of the Modern Suspension Bridge, 2255
Interbasin Water Transfer: Economic Water Quality-Based Model, 1209
Joint Water Quantity-Quality Management in a Biofuel Production Area—Integrated Economic-Hydrologic Modeling Analysis, 2009
Land Subsidence Disaster Survey and Its Economic Loss Assessment in Tianjin, China, 2081
Mechanisms for Transportation Infrastructure Investment in Developing Countries, 1927
Modeling Conjunctive Use Operations and Farm Decisions with Two-Stage Stochastic Quadratic Programming, 1998
Multiobjective Allocation of Transboundary Water Resources: Case of the Euphrates and Tigris, 1968
Neurofuzzy Decision Support System for Efficient Risk Allocation in Public-Private Partnership Infrastructure Projects, 310
Pisco, Peru, Earthquake of August 15, 2007, 2269
Political, Economic, and Legal Risks Faced in International Projects: Case Study of Vietnam, 1597
Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319
Road Traffic Congestion and Crash Severity: Econometric Analysis Using Ordered Response Models, 1833
Scheduling Renewal of Water Pipes While Considering Adjacency of Infrastructure Works and Economies of Scale, 2011
Selecting Infrastructure Delivery Modalities: No Time for Ideology or Semantics, 355
Synchronized Signal Control Model for Maximizing Progression along an Arterial, 1866
Systematic Framework for Incorporating Safety in Network-Level Transportation Planning and Programming, 1834
Valuation of Flood Reductions in the Yellow River Basin under Land Use Change, 1969
What If You Have Been Retrenched? Look toward the Bright Side: Capitalize on Your Psychological Capital, 2071

Ecosystems

Designing Storm-Water Controls to Promote Sustainable Ecosystems: Science and Application, 1106
Ecological Corridor in the Urban Area: Case Study in Kaohsiung City, Taiwan, 2103
Emerging Hybrid Practices in Construction Design Work: Role of Mixed Media, 361
Environmental Biotechnology in Water and Wastewater Treatment, 650
Field Evaluation of Bauxite Residue Neutralization by Carbon Dioxide, Vegetation, and Organic Amendments, 726
Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054
Numerical Modeling of River Flow for Ecohydraulic Applications: Some Experiences with Velocity Characterization in Field and Simulated Data, 1050
Observation on Particulate Matter over a Period of 3 Years at Kaikhali (22.022°N and 88.614°E) inside a Special Mangrove Ecosystem: Sundarbans, 622
River Training and Ecological Enhancement Potential Using In-Stream Structures, 1045
Urban Land-Use Zoning Based on Ecological Evaluation for Large Conurbations in Less Developed Regions: Case Study in Foshan, China, 1929
Valuing Drinking Water Provision as an Ecosystem Service in the Neuse River Basin, 2006

Education-practice interchange

Model of Integrating Humanitarian Development into Engineering Education, 1590
On the Job versus Graduate School Training of Forensic Engineers—An Instructor and Professional Engineer's View, 1503

Effective width

Evaluation of Direct Strength Method for CFS Compression Members without Stiffeners, 1694
Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693

Effluents

Biological and Abiotic Color Reduction of Paper Mill Effluents during Anaerobic Composting, 692

Egypt

Evaluation and Adaptation of the EGM2008 Geopotential Model along the Northern Nile Valley, Egypt: Case Study, 1770
Excavation Game: Computer-Aided-Learning Tool for Teaching Construction Engineering Decision Making, 1600

Eigenvalues

Dynamic Behavior of Stay Cables with Rotational Dampers, 528
Efficient Model Correction Method with Modal Measurement, 468
First-Order Solutions for the Buckling Loads of Euler-Bernoulli Weakened Columns, 525
Free Vibration Analysis of Cylindrical Shells Supported on Parts of the Edges, 42

Elastic foundations

Buckling of a Weakened Infinite Beam on an Elastic Foundation, 513

Elasticity

Closed-Form Solution of Axisymmetric Slender Elastic Toroidal Shells, 586
Comparison between Coupled and Uncoupled Consolidation Analysis of a Rigid Sphere in a Porous Elastic Infinite Space, 564
Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423
Dynamic Instability of Nanorods/Nanotubes Subjected to an End Follower Force, 563
Effects of Calcium Carbide Residue–Fly Ash Binder on Mechanical Properties of Concrete, 1474
Finite-Element Model Approach to Determine Support Conditions and Effective Layout for Concrete Block Paving, 1471
Forecasting Cybercar Use for Airport Ground Access: Case Study at Baltimore Washington International Airport, 1938
Influence of Nonlinearity on the Stress Distribution in the Soil—Application to Road Engineering Problems, 1797
Investigation of the Thermal Conductivity of Compacted Silts and Its Correlation to the Elastic Modulus, 1386

Mechanistic Corrections for Determining the Resilient Modulus of Base Course Materials Based on Elastic Wave Measurements, 881

Micromechanical Explanation of Elasticity and Strength of Gypsum: From Elongated Anisotropic Crystals to Isotropic Porous Polycrystals, 483

Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740

New Layer-Moduli Back-Calculation Method Based on the Constrained Extended Kalman Filter, 1790

Nonlinear Analysis of Composite Beams with Partial Interaction in Steel Frame Structures at Elevated Temperature, 1703

Parameter Identification Procedure for Heterogeneous Viscoelastic Composites Using Iterative Functions, 541

Proposed Loading Waveforms and Loading Time Equations for Mechanistic-Empirical Pavement Design and Analysis, 1843

Response of an Elastic Structure Subject to Air Shock Considering Fluid-Structure Interaction, 59

Seismic Behavior of Batter Piles: Elastic Response, 891

Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718

Simple Three-Step Analytical Scheme for Prediction of Elastic Moduli of Hardened Cement Paste, 1478

Stress-Prediction Model for Airport Pavements with Jointed Concrete Slabs, 1859

Use of High Fineness of Fly Ash to Improve Properties of Recycled Aggregate Concrete, 1404

Vibration Analysis of an Elastic Beam Subjected to a Moving Beam with Flexible Connections, 471

Elastoplasticity

Convexity of Yield Surface with Directional Distortional Hardening Rules, 507

Determining the Shapes of Yield Curves for Unsaturated Soils by Modified State Surface Approach, 796

Elastoplastic Mesoscale Homogenization of Composite Materials, 520

Hydraulic Property Estimation Using Piezocone Results, 818

Implementation and Application of a New Elastoplastic Model Based on a Multiaxial Criterion to Assess the Stress State near Underground Openings, 13

Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials, 518

Modified Schapery's Model for Asphalt Sand, 503

Numerical Simulation of Viscoelastoplastic Land Subsidence due to Groundwater Overdrafting in Shanghai, China, 1079

Shakedown Approaches to Rut Depth Prediction in Low-Volume Roads, 600

Electric power

Determination and Optimization of the Maintenance Frequencies in the Overhead Contact Line System, 1893

Energy Infrastructure Damage Analysis for Hurricane Rita, 2088

Energy Supply System Performance for Hurricane Katrina, 457

Estimation of a Sensitivity-Based Metric for Detecting Market Power, 450

Evaluation of Black-Start Schemes Employing Entropy Weight-Based Decision-Making Theory, 451

Electric transmission

Estimation of a Sensitivity-Based Metric for Detecting Market Power, 450

Electric transmission lines

Electrical Transmission and Substation Structures 2009, 2240

Guidelines for Electrical Transmission Line Structural Loading, 2253

Electric transmission structures

Blast Limits for Transmission Structures. I: Response Spectra Development, 1500

Blast Limits for Transmission Structures. II: Structural Response and Blast Limit Development, 1501

Electrical Transmission and Substation Structures 2009, 2240

Extending the Service Life of Electric Distribution and Transmission Wooden Poles Using a Wet Layup FRP Composite Strengthening System, 1537

Guidelines for Electrical Transmission Line Structural Loading, 2253

Improved Design of Embedment Depths for Transmission Pole Foundations Subject to Lateral Loading, 2137

Structural Applications of Steel Cables for Buildings, 2283

Electrical conductivity

Evaluation of a Dielectric Sensor for Measurement of Soil-Water Electrical Conductivity, 1261

Groundwater Classification Using Multivariate Statistical Methods: Birimian Basin, Ghana, 765

Electrical systems

Learning Applications in the Architectural Engineering Educational Setting, 90

Organizational Divisions in BIM-Enabled Commercial Construction, 360

Electrokinetics

Design Framework for Electrokinetically Enhanced Dewatering of Sludge, 659

Removal of Hexachlorobenzene and Phenanthrene from Clayey Soil by Surfactant- and Ultrasound-Assisted Electrokinetics, 696

Embankments

Behavior of an Atypical Embankment on Soft Soil: Field Observations and Numerical Simulation, 778

Contact Erosion at the Interface between Granular Coarse Soil and Various Base Soils under Tangential Flow Condition, 846

Embankments over Soft Clay Deposits: Contribution of Basal Reinforcement and Surface Sand Layer to Stability, 799

Field Tests on Pile-Supported Embankments over Soft Ground, 850

Free-Field Measurements to Disclose Lateral Reaction Mechanism of Piles Subjected to Soil Movements, 806

Multicriteria Decision-Making Approach for Highway Slope Hazard Management, 1167

Nonlinear Finite-Element-Based Investigation of the Effect of Bedding Thickness on Buried Concrete Pipe, 1873

Performance of Geosynthetic-Encased Stone Columns in Embankment Construction: Numerical Investigation, 887

Predicting Peak Outflow from Breached Embankment Dams, 1090
Structural Behavior of a Pile-Supported Embankment, 777
Thermal Interaction between Permafrost and the Qinghai-Tibet Railway, 175
Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176
Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869
Use of Lightweight ECS as a Fill Material to Control Approach Embankment Settlements, 1409

Embedment
Improved Design of Embedment Depths for Transmission Pole Foundations Subject to Lateral Loading, 2137
Mechanics of Drag Embedment Anchors in a Soft Seabed, 780

Emergency services
Building Community Disaster Preparedness with Volunteers: Community Emergency Response Teams in Illinois, 2090
Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095
Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086
Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289
Models for Managing Contingency Construction Operations, 353
Tsunami Preparedness on the Oregon and Washington Coast: Recommendations for Research, 2085
Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Emissions
Accounting for Greenhouse Gas Emissions in Multiobjective Genetic Algorithm Optimization of Water Distribution Systems, 1974
Assessment of Policies toward an Environmentally Friendly Urban Transport System: Case Study of Delhi, India, 1926
Biocover Performance of Landfill Methane Oxidation: Experimental Results, 702
Contribution of Traffic-Generated Nonexhaust PAHs, Elemental Carbon, and Organic Carbon Emission to Air and Urban Runoff Pollution, 774
Development of EPA OTM 10 for Landfill Applications, 700
Diesel Particulate Matter Number Emissions: Evaluation of Existing Modal Emission Modeling Approaches, 1799
Electron Beam Irradiation for Mercury Oxidation and Mercury Emissions Control, 675
Field Procedures for Real-World Measurements of Emissions from Diesel Construction Vehicles, 1186
Fugitive Methane Emissions from Landfills: Field Comparison of Five Methods on a French Landfill, 701
Incorporation of Air Emissions in Dredging Method Selection, 2046
Insight into Nitrous Oxide Emissions from Biological Wastewater Treatment and Biosolids Disposal, 2112
Life-Cycle Optimization of Pavement Overlay Systems, 1195
Life-Cycle Perspective on Residential Water Conservation Strategies, 1166
Single-Objective versus Multiobjective Optimization of Water Distribution Systems Accounting for Greenhouse Gas Emissions by Carbon Pricing, 2015

Empirical equations
Empirical Modeling Methodologies for Construction, 318
Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138
Semiempirical Approach for Estimation of DDC-Induced Deflections of Sheet Pile Walls in Peat, 1504
Validation and Application of Empirical Liquefaction Models, 931

Employees
Sleep Deprivation and Its Consequences in Construction Workers, 422
What If You Have Been Retrenched? Look toward the Bright Side: Capitalize on Your Psychological Capital, 2071

Employment
What If You Have Been Retrenched? Look toward the Bright Side: Capitalize on Your Psychological Capital, 2071

Encasements
Studies on the Behavior of Single and Group of Geosynthetic Encased Stone Columns, 786

Energy
Considering Carbon Capture and Storage for Energy Generation from Municipal Solid Waste, 698
Cost-Effectiveness of Green Roofs, 91
Degradation of Chlorobenzene in Water Using Nanoscale Cu Coupled with Microwave Irradiation, 658
Direct Formula to Compute Wave Height and Angle at Incipient Breaking, 2040
Effect of Secondary Impacts on SPT Rod Energy and Sampler Penetration, 824
Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268
Energy Conservation Opportunities in an Industrial Boiler System, 449
Impact of the Leadership in Energy and Environmental Design Accredited Professional Credential on Design Professionals, 1594
Inexact Community-Scale Energy Systems Planning Model, 1939
Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718
Stiffness Degradation and Time to Cracking of Cover Concrete in Reinforced Concrete Structures Subject to Corrosion, 480

Energy consumption
Combined Cycle Power Augmentation by Overspray Inlet Fogging, 448
Life-Cycle Perspective on Residential Water Conservation Strategies, 1166
Simulation-Based Analysis of Train Controls under Various Track Alignments, 1890

Energy conversion

Assessment of Policies toward an Environmentally Friendly Urban Transport System: Case Study of Delhi, India, 1926

Energy dissipation

Application of Shakedown Theory in Characterizing Traditional and Recycled Pavement Base Materials, 1813

Bidirectional Seismic Behavior of Controlled Rocking Four-Legged Bridge Steel Truss Piers, 1754

Block Ramp Design for Efficient Energy Dissipation, 446

Characterization of a Roller Seismic Isolation Bearing with Supplemental Energy Dissipation for Highway Bridges, 1658

Characterization of Fatigue and Healing in Asphalt Binders, 1438

Cyclic Behavior of Diagrid Nodes with H-Section Braces, 1717

Cyclic Behavior of Shear Links of Various Grades of Plate Steel, 1645

Design of a Scroll Vortex Inlet for Supercritical Approach Flow, 1030

Energy Dissipative Plunging Flows, 996

Hybrid Control Charts for Active Control and Monitoring of Concrete Strength, 1348

Performance Test of Energy Dissipation Bearing and Its Application in Seismic Control of a Long-Span Bridge, 153

Seismic Testing of a Bridge Steel Truss Pier Designed for Controlled Rocking, 1755

Working of Defense Coastal Structures Dissipating by Macroroughness, 2036

Energy efficiency

CFD Analysis of Turbulent Natural Ventilation in Double-Skin Façade: Thermal Mass and Energy Efficiency, 454

Energy Audit of Water Networks, 2027

Opportunities for Efficient and Environmentally Friendly Energy Systems: BMC Case Study in Lobatse, Botswana, 453

Optimization of Underground Water Pumping, 1246

Energy losses

Energy Losses in Cross Junctions, 946

Energy methods

Free Vibration Analysis of Cylindrical Shells Supported on Parts of the Edges, 42

Energy sources

Bioenergy and Biofuel from Biowastes and Biomass, 2228

Giving It Juice, 2212

Energy storage

Energy Variability and Produced Water: Two Challenges, One Synergistic Management Approach Using Pumped Hydroelectric Energy Storage, 447

Sustainable Electric Power System: Is It Possible? Case Study: Croatia, 458

Engineering education

Architectural Engineering Curriculum at Missouri University of Science and Technology, 83

Cultivating Research and Information Skills in Civil Engineering Undergraduate Students, 1584

Developing and Teaching a Course in "Applied Sustainability and Public Health in Civil Engineering Design" at Queen's University, Kingston, Canada, 1601

Education for Sustainable Development and Civil Engineering for Children: Interactive Model Case Study, 1598

Excavation Game: Computer-Aided-Learning Tool for Teaching Construction Engineering Decision Making, 1600

Experimental Research in Construction, 317

Graduate Education in Construction Management, 1599

Improving Engineering Education Outreach in Rural Counties through Engineering Risk Analysis, 1604

Leading, Learning, and Living the Shackleton Way: Education and Practice, 2066

Learning Applications in the Architectural Engineering Educational Setting, 90

Lessons Learned from a Design Competition for Structural Engineering Students: The Case of a Pedestrian Walkway at the Université de Sherbrooke, 1587

Methodology for Written and Oral Presentation of Research Results, 1593

Model of Integrating Humanitarian Development into Engineering Education, 1590

On the Job versus Graduate School Training of Forensic Engineers—An Instructor and Professional Engineer's View, 1503

Outreach to K–12 Teachers: Workshop in Instrumentation, Sensors, and Engineering, 1592

Pedagogy of Teaching Value Management in Postgraduate Construction and Property Program, 1591

Perspectives on Leadership from Female Engineering Deans, 2077

Practical Summer Training in Civil and Construction Engineering for Cultivation of Professional Ability, 1605

Principles and Practice of Engineering, 2271

Program Assessment and Evaluation Using Student Grades Obtained on Outcome-Related Course Learning Objectives, 1602

Project Management Application for Engineering Program Accreditation Preparation, 1586

Revisiting the Gathering Storm, 2222

Teaching Building Information Modeling as an Integral Part of Freshman Year Civil Engineering Education, 1585

Engineering firms

Doing Business the Right Way, 2196

Engineering mechanics

Prediction of Extreme Response Statistics of Narrow-Band Random Vibrations, 488

Engineering profession

Chinese Values and Stressors of Construction Professionals in Hong Kong, 442

Disproportionate Collapse: Terminology and Procedures, 1548

Expert System Software: Use Only as Directed, 2069

Globalization: Conundrums and Paradoxes for Civil Engineering, 2063

Great Achievements & Grand Challenges, 2164

Special Report: The Infrastructure Roundtables: Increase Federal Leadership in Infrastructure, 2174

Engineers
Bridginess, 2229
The Burj Khalifa Triumphs: Engineering an Idea: The Realization Of the Burj Khalifa, 2169
C. Shaler Smith, 113
Cabin John Bridge: Role of Alfred L. Rives, C.E., 1514
Charles Macdonald, 148
Economics and Finance for Engineers and Planners, 2238
Great Achievements & Grand Challenges, 2164
Joseph B. Strauss, Charles A. Ellis, and the Golden Gate Bridge: Justice at Last, 1589
Under Control, 2214

Entrainment
Chute Aerators. II: Hydraulic Design, 981
Hydrodynamic Forces Generated on a Spherical Sediment Particle during Entrainment, 1019
Modified Thermal Theory for Gravity Currents on Sloping Boundaries, 1028
Sediment Entrainment at High Flow Velocity, 1001

Entropy methods
Evaluation of Black-Start Schemes Employing Entropy Weight-Based Decision-Making Theory, 451
Formulation of the Entropy Parameter Based on Hydraulic and Geometric Characteristics of River Cross Sections, 1141
Gauging Rivers during All Seasons Using the Q2D Velocity Index Method, 963
Linear Algebra and Minimum Relative Entropy to Investigate Contamination Events in Drinking Water Systems, 2007
Minimum Moment Method for Resource Leveling Using Entropy Maximization, 366
Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326
Soil Moisture Profile Development from Surface Observations by Principle of Maximum Entropy, 1089

Environmental engineering
Application of a Mass Balance-Based Stochastic Transport Model, 2113
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095
REILP Approach for Uncertainty-Based Decision Making in Civil Engineering, 294
Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966
World Environmental and Water Resources Congress 2010, 2296

Environmental issues
Assessing the Environmental Impacts of a Lean Supply System: Case Study of High-Rise Condominium Construction in Korea, 92
Containing the Constraints, 2190
Developing and Teaching a Course in "Applied Sustainability and Public Health in Civil Engineering Design" at Queen's University, Kingston, Canada, 1601
Durability and Environmental Performance of Alkali-Activated Tungsten Mine Waste Mud Mortars, 1444
Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194
Effects of Urbanization on Groundwater, 2239
Emerging Contaminants of Environmental Concern: Source, Transport, Fate, and Treatment, 2096
Environmental Reduction Factors for GFRP Bars Used as Concrete Reinforcement: New Scientific Approach, 225
Greener Roads Ahead, 2210
High-Performance Green Building Design Process Modeling and Integrated Use of Visualization Tools, 80
Incorporation of Air Emissions in Dredging Method Selection, 2046
Inexact Community-Scale Energy Systems Planning Model, 1939
Influence of Mechanical Draft Tube Fish Barrier on the Hydraulic Thrust of Small Francis Turbines, 1038
Integrated Planning Framework for Urban River Rehabilitation, 2029
LEED Implementation Guide for Construction Practitioners, 85
Life-Cycle Assessment Modeling of Construction Processes for Buildings, 1184
Observation on Particulate Matter over a Period of 3 Years at Kaikhali (22.022°N and 88.614°E) inside a Special Mangrove Ecosystem: Sundarbans, 622
Opportunities for Efficient and Environmentally Friendly Energy Systems: BMC Case Study in Lobatse, Botswana, 453
Quantification of the Environmental Benefits of Ultrafine/Nanotitanium Dioxide Photocatalyst Coatings for Concrete Pavement Using Hybrid Life-Cycle Assessment, 1179
Systems Management Study of a Private Brownfield Renovation, 1945

Environmental Protection Agency
Development of EPA OTM 10 for Landfill Applications, 700
Integrated Planning Framework for Urban River Rehabilitation, 2029

Enzymes
Luminol-Based Enhanced Chemiluminescence Assay for Quantification of Peroxidase and Hydrogen Peroxide in Aqueous Solutions: Effect of Reagent pH and Ionic Strength, 738

Epoxy
Effective Repair for Corrosion Control Using FRP Wraps, 215
Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256
Thermoviscoelastic Analysis and Creep Testing of Ambient Temperature Cure Epoxies Used in Adhesive Anchor Applications, 1460

Equations of motion
Speed Prediction Models for Multilane Highways: Simultaneous Equations Approach, 1880

Equilibrium
Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668
Delay Function for Signalized Intersections in Traffic Assignment Models, 1924
Influence of Vertical Resolution and Nonequilibrium Model on Three-Dimensional Calculations of Flow and Sediment Transport, 953

L_p-Norm Path Flow Estimator for Handling Traffic Count Inconsistencies: Formulation and Solution Algorithm, 1848

Model to Describe the Binodal Curve on a Type 1 Ternary Phase Diagram, 686

New Relationships for Equilibrium Shaped Bays, 2050

Origin-Based Partial Linearization Method for the Stochastic User Equilibrium Traffic Assignment Problem, 1794

Erosion

Bioengineering Techniques Associated with Soil Nailing Applied to Slope Stabilization and Erosion Control, 2082

Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003

Designing Storm-Water Controls to Promote Sustainable Ecosystems: Science and Application, 1106

Draining the Tangjiashan Barrier Lake, 1037

Effect of Flood Recession on Scouring at Bed Sills, 964

Runoff Characteristics for Construction Site Erosion Control Practices, 1245

Sediment Entrainment at High Flow Velocity, 1001

Sediment Transport on Arbitrary Slopes: Simplified Model, 974

Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045

Temporal Scales for Live-Bed Scour at Abutments, 985

Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Errors

Application of Natural Clayey Soil as Adsorbent for the Removal of Copper from Wastewater, 769

Assessing the Accuracy of Applying Photogrammetry to Take Geometric Measurements on Building Products, 339

Design Error Classification, Causation, and Prevention in Construction Engineering, 1536

Error Assessment for Spectral Representation Method in Wind Velocity Field Simulation, 568

Estimation of Unsaturated Hydraulic Parameters from Infiltration and Internal Drainage Experiments, 1283

Explicit Pseudodynamic Algorithm with Improved Stability Properties, 519

Modeling Radar Rainfall Estimation Uncertainties: Random Error Model, 1084

Near-Transducer Errors in ADCP Measurements: Experimental Findings, 971

Quantifying Linearization Error When Modeling Fluid Pipeline Transients Using the Frequency Response Method, 1029

A Rough Ride on the O'ahu Rail Transit Project, 2065

Vision-Based Roadway Geometry Computation, 1814

Worst-Case Pointwise Discretization Error Bounds for Systems with Geometrically Induced Singular Flux Solutions Using Interval Boundary Element Method, 529

Estimation

Artificial Neural Network Model for Cost Estimation: City of Edmonton's Water and Sewer Installation Services, 388

CBR Revision Model for Improving Cost Prediction Accuracy in Multifamily Housing Projects, 1338

Contemporaneous Time Series and Forecasting Methodologies for Predicting Short-Term Productivity, 418

Cross-Validation of Short-Term Productivity Forecasting Methodologies, 417

Development and Empirical Study of Real-Time Simulation-Based Dynamic Traffic Assignment Model, 1897

Diagnostic Curves for Identifying Leaky Aquifer Parameters with or without Aquitard Storage, 1204

Direct Joint Probability Method for Estimating Extreme Sea Levels, 2035

Effect of Adaptive Cluster Sampling Design on Accuracy of Sediment Rating Curve Estimation, 1071

Estimating the Social and Economic Consequences of Natural Hazards: Fiscal Impact Example, 2083

Estimation of Cost Contingency for Air Force Construction Projects, 431

Estimation of Highway Maintenance Marginal Cost under Multiple Maintenance Activities, 1881

Increasing the Efficacy of the Conventional Deformation Analysis Methods: Alternative Strategy, 1773

Infilling Missing Daily Evapotranspiration Data Using Neural Networks, 1235

Interpolating Surface Gravity Data for Assessing the Accuracy of a Ground Inertial Navigation System/Global Positioning System Gravimetric System, 1783

Local Polynomial–Based Flood Frequency Estimator for Mixed Population, 1123

Modeling the Oxidation of Sulfide in Pulp and Paper Wastewaters, 741

Modeling the Relationship between Capillary Suction Time and Specific Resistance to Filtration, 720

Modeling Urban Storm-Water Quality Treatment: Model Development and Application to a Surface Sand Filter, 616

Preliminary Cost Estimation Model Using Case-Based Reasoning and Genetic Algorithms, 307

Rapid Girder Selection and Cost Estimation for Simple-Made-Continuous Steel Bridge Design, 2158

Simple Method for Quick Estimation of Leaky-Aquifer Parameters, 1217

Estuaries

Estuarine and Coastal Modeling, 2241

Influence of Physical Forcing on Bottom-Water Dissolved Oxygen within Caloosahatchee River Estuary, Florida, 725

Numerical Age and Residence-Time Mapping for a Small Tidal Creek: Case Study, 2049

Ethics

Doing Business the Right Way, 2196

Forensic Engineering 2009, 2245

Joseph B. Strauss, Charles A. Ellis, and the Golden Gate Bridge: Justice at Last, 1589

Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry, 1582

Ethiopia

Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975

Europe

Affordable Housing and Social Mix: Comparative Approach, 1296

Eurohypothec: Drafting a Common Mortgage for Europe, 1298
Housing Law Is Dead. Long Live European Housing Law?, 1295
Impact of the EU Mediation Directive on the German Construction Sector, 1307
Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913
Integral Abutment Bridges: The European Way, 2150
Performance of a Retrofitted Medieval Stone Bridge under a Severe Flood, 1545
Sustainable Electric Power System: Is It Possible? Case Study: Croatia, 458

Eutrophication

Dual Discharge Approach to Accessing Assimilative Capacity: Probabilistic Analysis and Management Application, 688
Optimization of Watershed Control Strategies for Reservoir Eutrophication Management, 1291
Robust Multivariate Outlier Detection Methods for Environmental Data, 755
Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617

Evacuation

Development of a Large-Scale Traffic Simulation Model for Hurricane Evacuation—Methodology and Lessons Learned, 2091
Tsunami Preparedness on the Oregon and Washington Coast: Recommendations for Research, 2085

Evaluation

Bend Strength of FRP Stirrups: Comparison and Evaluation of Testing Methods, 177
Certifying That Existing Suspended Scaffold Structural Support Elements and Lifeline Anchorages Comply with Federal OSHA Requirements, 2149
Effect of Concrete Compositions in Energy Transmission of Surface Waves for Nondestructive Crack Depth Evaluation, 1425
Evaluating Unplanned Stand-Alone Transportation Projects: Linking Incremental and Comprehensive Planning, 1952
Gray Clustering-Based Pavement Performance Evaluation, 1792
Impact of Irrigation Management Transfer on Land and Water Productivity and Water Supply in the Gediz Basin, Turkey, 1233
Interrater Reliability of Manual Pavement Distress Evaluations, 1807
Performance of Bridge Materials by Structural Deficiency Analysis, 1530
Stability Analysis of Strain-Softening Slope Reinforced with Stabilizing Piles, 927
Vibration Serviceability of a Building Floor Structure. II: Vibration Evaluation and Assessment, 1547

Evaporation

Comparison of Simplified Pan-Based Equations for Estimating Reference Evapotranspiration, 1214
Evaporation, Unsaturated Flow, and Salt Accumulation in Multilayer Deposits of "Paste" Gold Tailings, 939
Modeling Evaporative Water Loss from the On-Farm Reservoir with Biological Shading, 1111
New Performance-Based Approach to Ensure Quality Curing during Construction, 1418
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095

Evapotranspiration

Case Study on the Accuracy and Cost/Effectiveness in Simulating Reference Evapotranspiration in West-Central Florida, 1125
Combining Remotely Sensed Data and Ground-Based Radiometers to Estimate Crop Cover and Surface Temperatures at Daily Time Steps, 1225
Comparison of Simplified Pan-Based Equations for Estimating Reference Evapotranspiration, 1214
Distribution and Trends in Reference Evapotranspiration in the North China Plain, 1226
Estimating Reference Evapotranspiration with Minimum Data in Florida, 1254
Estimation of Evapotranspiration from Bioretention Areas Using Weighing Lysimeters, 1108
Evapotranspiration Modeling Using Linear Genetic Programming Technique, 1278
Fuzzy Genetic Approach for Modeling Reference Evapotranspiration, 1219
Generalization of ET_o ANN Models through Data Supplanting, 1218
Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221
Infilling Missing Daily Evapotranspiration Data Using Neural Networks, 1235
Modeling Evapotranspiration Effects on Air Flowing in a Small Glass Roofed Tunnel, 1236
Modeling Evapotranspiration of Two Land Covers Using Integrated Hydrologic Model, 1256
Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224
Performance of Penman-Monteith FAO56 in a Semiarid Highland Environment, 1282
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095
Regional Estimation of Reference Evapotranspiration in Arid and Semiarid Regions, 1279
Relative Comparison of the Local Recalibration of the Temperature-Based Evapotranspiration Equation for the Korea Peninsula, 1266

Excavation

Application of BGPR Logging: Two Case Studies, 848
Buried Pipeline Response to Braced Excavation Movements, 1518
Comparison between Models of Rock Discontinuity Strength and Deformation, 858
Deep and Underground Excavations (GSP 206), 2232
Earth Retention Conference 3, 2237
Excavation Game: Computer-Aided-Learning Tool for Teaching Construction Engineering Decision Making, 1600
Ground Movements around Corners of Excavations: Empirical Calculation Method, 911
Interplay between Field Measurements and Soil Behavior for Capturing Supported Excavation Response, 781
Mastering a Mountain, 2223
Modeling of Ground Excavation with the Particle Finite-Element Method, 504
Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838
Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871

Excitation

Decomposition and Effects of Pulse Components in Near-Field Ground Motions, 1675

Monte–Carlo Based Method for Predicting Extreme Value Statistics of Uncertain Structures, 605

Nonlinear Dynamic Response of Piles under Horizontal Excitation, 929

Probabilistic Seismic Loss Assessment of a Vancouver High-Rise Building, 1630

Stochastic Response of an Inclined Shallow Cable with Linear Viscous Dampers under Stochastic Excitation, 599

Wind-Induced Response Characteristics of Monolayer Cable Net, 490

Expansive soils

Ground Improvement and Geosynthetics (GSP 207), 2251

Importance of Mineralogy in the Geoenvironmental Characterization and Treatment of Chromite Ore Processing Residue, 823

Influence of Osmotic Suction on the Soil-Water Characteristic Curves of Compacted Expansive Clay, 938

Quality Assessment and Quality Control of Deep Soil Mixing Construction for Stabilizing Expansive Subsoils, 785

Experimentation

Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674

Bidirectional Pedestrian Stream Model with Oblique Intersecting Angle, 1815

Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812

Centrifuge Permeameter for Unsaturated Soils. I: Theoretical Basis and Experimental Developments, 878

Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751

Characterization of the Residual Stress State in Commercially Fully Toughened Glass, 1359

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Experimental Investigations, 1643

Cyclic Behavior of Shear Links of Various Grades of Plate Steel, 1645

Design and Evaluation of Experimental Bridges in Tennessee, 1498

Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578

Direct Tension Pullout Bond Test: Experimental Results, 1680

Effectiveness of Moisture and Fixatives in Controlling Mobility of Contaminated Soil Particles by Wind Forces, 2119

Energy Conservation Opportunities in an Industrial Boiler System, 449

Evaluation of the Credibility of Reflectorless Distance Measurement, 1786

Experimental Analysis of Hydraulic Solver Convergence with Genetic Algorithms, 977

Experimental and Applied Modeling of Unsaturated Soils (GSP 202), 2243

Experimental and Numerical Quantification of Plastic Settlement in Fresh Cementitious Systems, 1450

Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26

Experimental Estimation of the Relative Deterioration of Surface Maintenance Treatments, 1788

Experimental Investigation of a Vortex-Flow Restrictor: Rain-Blocker Performance Tests, 998

Experimental Investigation of Bending Fatigue Response of Grouted Stay Cables, 106

Experimental Investigation of the Axial Capacity of Inelastically Pretwisted Steel Bars, 560

Experimental Investigation on Square High-Strength Concrete Short Columns Confined with AFRP Sheets, 210

Experimental Research in Construction, 317

Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517

Experimental Study of Particle Motion on a Smooth Bed under Shoaling Waves Using Particle Image Velocimetry, 543

Experimental Study of Three-Dimensional Flow Field around a Complex Bridge Pier, 473

Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123

Experimental Study on the Impact of Rainfall on RCC Construction, 362

Experimental Study on the Multisegment Regime of the Water Flow in Drip Emitters, 1228

Experiments on the Buckling Behavior of Ring-Stiffened Pipelines under Hydrostatic Pressure, 505

Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218

Flax Fiber-Reinforced Glued-Laminated Timber in Tension Perpendicular to the Grain: Experimental Study and Probabilistic Analysis, 1436

Forensic Examination of a Noncomposite Adjacent Precast Prestressed Concrete Box Beam Bridge, 133

Fragility Assessment of Reduced Beam Section Moment Connections, 1720

In-Plane Behavior of Partially Grouted Reinforced Concrete Masonry Shear Walls, 1715

In-Plane Experimental Testing of Timber-Concrete Composite Floor Diaphragms, 1750

In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. I: Experimental Investigation, 250

Kaolinite and Lead in Saturated Porous Media: Facilitated and Impeded Transport, 756

Long-Term Behavior of Composite Beams under Positive and Negative Bending. I: Experimental Study, 1691

Mechanical Properties of Steel-FRP Composite Bar under Uniaxial and Cyclic Tensile Loads, 1462

Near-Transducer Errors in ADCP Measurements: Experimental Findings, 971

Nonlinear Unified Strength Criterion for Concrete under Three-Dimensional Stress States, 464

Observed and Modeled Performances of Prototype Green Roof Test Plots Subjected to Simulated Low- and High-Intensity Precipitations in a Laboratory Experiment, 1100

Permeability Reduction in Pervious Concretes due to Clogging: Experiments and Modeling, 1424

Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593

Seismic Testing of a Bridge Steel Truss Pier Designed for Controlled Rocking, 1755

Shear Capacity of the Flange-Web Intersections of Brick Masonry Nonrectangular Sections, 1665
Shear Strength of a Lightweight Self-Consolidating Concrete Bridge Girder, 152
Size Effects for Reinforced Concrete Beams Strengthened in Shear with CFRP Strips, 202
Strengthening RC T-Beams Subjected to Combined Torsion and Shear Using FRP Fabrics: Experimental Study, 206
Stress-Strain Responses of Block Samples of Compressible Chicago Glacial Clays, 790
Sustained-Load and Fatigue Performance of a Hybrid FRP-Concrete Bridge Deck System, 260
Time-Dependent Behavior of Concrete-Filled Steel Tubular Arch Bridge, 104
Tracking Error-Based Servohydraulic Actuator Adaptive Compensation for Real-Time Hybrid Simulation, 1651
Wave and Flow Response to an Artificial Surf Reef: Laboratory Measurements, 973

Expert systems

Expert System Approach for Soil Structure Interaction and Land Use, 1931
Expert System Software: Use Only as Directed, 2069
Hierarchical Fuzzy Expert System for Risk of Failure of Water Mains, 1567
Inspection and Repair of Ceramic Tiling within a Building Management System, 1344
Methodology for Bayesian Belief Network Development to Facilitate Compliance with Water Quality Regulations, 1168
SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractors for Bonding, 435
Using Fuzzy Logic and Expert System Approaches in Evaluating Flexible Pavement Distress: Case Study, 1805

Expert witness

Forensic Engineering 2009, 2245

Explosions

Building Robustness Research during World War II, 1549
Explosion Performance of a Ball Powder Production Facility, 1528
Explosion Phenomena and Effects of Explosions on Structures. I: Phenomena and Effects, 2143
Explosion Phenomena and Effects of Explosions on Structures. II: Methods of Analysis (Explosion Effects), 2144
Explosion Phenomena and Effects of Explosions on Structures. III: Methods of Analysis (Explosion Damage to Structures) and Example Cases, 2145
Femtotechnology: Design of the Strongest AB Matter for Aerospace, 69

Explosives

Adsorption of RDX and its Nitroso Metabolites onto Activated Carbon, 2104
Guidelines for Roving Security Inspections in Public Venues Using Explosives Detection Dogs, 2254

Fabrication

Charles Macdonald, 148

Fabrics

Effect of Fabric Webs on the Static Response of Spindle-Shaped Tensairity Columns, 1649
Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218

Facilities

Facility Maintenance Performance Perspective to Target Strategic Organizational Objectives, 1513

Facility expansion

Emphasis on Expansion, 2206

Faculty

Perspectives on Leadership from Female Engineering Deans, 2077
Successful Leadership Development for Women STEM Faculty, 2075

Failure investigations

Automated Detection and Location of Leaks in Water Mains Using Infrared Photography, 1519

Failure modes

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Design, 1644
Cyclic Behavior of Shear Links of Various Grades of Plate Steel, 1645
Development of Mechanical Anchor for CFRP Tendons Using Integrated Sleeve, 216
Evaluation of Masonry Deep Beams Externally Strengthened with CFRP Sheets, 191
Experimental Behavior of FRP Strengthened Masonry Arches, 207
Experimental Observation on the Effectiveness of Fiber Sheet Strip Stirrups in Concrete Beams, 226
Risk Management in the Construction Industry Using Combined Fuzzy FMEA and Fuzzy AHP, 416

Failures

Analysis of Wind-Induced Clip Loads on Standing Seam Metal Roofs, 1641
Behavior of Bridge Asphalt Plug Joints under Thermal and Traffic Loads, 118
Bioengineering Techniques Associated with Soil Nailing Applied to Slope Stabilization and Erosion Control, 2082
Compression Performance of Steel Pipelines with Welded Slip Joints, 1561
Determining the Shapes of Yield Curves for Unsaturated Soils by Modified State Surface Approach, 796
Direct Tension Pullout Bond Test: Experimental Results, 1680
Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783
Evaluation and Remediation of an Abandoned Gypsum Mine, 835
Failure Mechanism of Empty and Concrete-Filled CFRP Box Beams, 209
Failure Mechanisms of Pile Foundations in Liquefiable Soil: Parametric Study, 19
Hierarchical Fuzzy Expert System for Risk of Failure of Water Mains, 1567
History of the Modern Suspension Bridge, 2255
Influence of Spatially Variable Side Friction on Single Drilled Shaft Resistance and LRFD Resistance Factors, 884
Innovative ANN Technique for Predicting Failure/Cracking Load of Masonry Wall Panel under Lateral Load, 296

Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands, 517

Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands

Investigation into the Effect of Bonding on FRP-Wrapped Cylindrical Concrete Columns, 246

Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames, 1655

Limit Analysis and Stability Charts for 3D Slope Failures, 831

Load-History Effects on Deformation Capacity of Flexural Members Limited by Bar Buckling, 1606

Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844

Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740

New Reference Wind Speed for Wind Turbines in Typhoon-Prone Areas in the Philippines, 1654

On a Possible Role of Rayleigh Surface Waves in Dynamic Slope Failures, 28

Optimizing Rolling Patterns for Chip Seals Using Laboratory Aggregate Loss Performance Tests on Field Fabricated Samples, 1520

Probabilistic Assessment of Slope Stability That Considers the Spatial Variability of Soil Properties, 870

Simplified Damage Assessment Method for Buried Structures against External Blast Load, 1667

Unified Strength Model Based on Hoek-Brown Failure Criterion for Circular and Square Concrete Columns Confined by FRP, 193

Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Utilizing Advanced Characterization Tools to Prevent Reflective Cracking, 1535

Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722

Falling bodies

Comparative Study of Static and Dynamic Falling Weight Deflectometer Back-Calculations Using Probabilistic Approach, 1811

Fares

Impacts of Transportation External Cost Pricing and Transit Fare Reductions on Household Mode/Route Choices and Environmental Improvements, 1954

Fast track construction

Partnering Process Model for Public-Sector Fast-Track Design-Build Projects in Korea, 1319

Fastening

Effect of Fastener-Deck Strength on the Wind-Uplift Performance of Mechanically Attached Roofing Assemblies, 2131

Loads on Track, Ballast Fouling, and Life Cycle under Dynamic Loading in Railways, 1904

Fatalities

Gender and Age Factors in Tsunami Casualties, 2080

Fatigue

Behavior of Bridge Asphalt Plug Joints under Thermal and Traffic Loads, 118

Characterization of Fatigue and Healing in Asphalt Binders, 1438

Compression Performance of Steel Pipelines with Welded Slip Joints, 1561

Effects of Aging on the Mechanical Characteristics of Bituminous Binders in PAC, 1429

Evaluation of the Low-Cycle Fatigue Life in ASTM A706 and A615 Grade 60 Steel Reinforcing Bars, 1347

Fatigue and Strength Evaluation of Two Glass Fiber-Reinforced Polymer Bridge Decks, 122

Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218

Fatigue Performance of Tension Steel Plates Strengthened with Prestressed CFRP Laminates, 237

Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477

Fatigue Testing of Stiffened Traffic Signal Structures, 1726

Hybrid Control Charts for Active Control and Monitoring of Concrete Strength, 1348

I-35W Bridge Collapse, 151

Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Fatigue Evaluation, 143

Influence of Flexibility on the Fatigue Performance of the Base Plate Connection in High-Mast Lighting Towers, 1639

Influence of Recycled Asphalt Pavement on Fatigue Performance of Asphalt Concrete Base Courses, 1413

Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129

Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759

Moving-Wheel Fatigue for Bridge Decks Strengthened with CFRP Strips Subject to Negative Bending, 253

Reducing Brittle and Fatigue Failures in Steel Structures, 2274

Simplified Nonlinear Temperature Curling Analysis for Jointed Concrete Pavements, 1858

Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Sustained-Load and Fatigue Performance of a Hybrid FRP-Concrete Bridge Deck System, 260

Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531

Fatigue life

Determination of Fatigue Life of a Granular Base Material Lightly Stabilized with Slag Lime from Indirect Diametral Tensile Testing, 1867

Loads on Track, Ballast Fouling, and Life Cycle under Dynamic Loading in Railways, 1904

Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759

Fatigue tests

Experimental Investigation of Bending Fatigue Response of Grouted Stay Cables, 106

Federal government

Special Report: The Infrastructure Roundtables: Concluding Thoughts— Increase Federal Leadership In Infrastructure, 2180

Special Report: The Infrastructure Roundtables: Concluding Thoughts—Develop Federal, Regional, and State Infrastructure Plans, 2182

Special Report: The Infrastructure Roundtables: Develop Federal, Regional, and State Infrastructure Plans, 2176

Special Report: The Infrastructure Roundtables: Increase Infrastructure Investment at All Levels of Government, 2178

Feedback control

Design of a Single-Pool Downstream Controller Using Quantitative Feedback Control Theory, 1275

Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578

Improved Decentralized Method for Control of Building Structures under Seismic Excitation, 524

Toll Plaza Merging Traffic Control for Throughput Maximization, 1796

Fences

Assessment of the Electromagnetic Disturbance of a Glass Fiber Reinforced Composite Fencing Structure, 239

Fertilizers

Competitive Sorption of Pesticides onto Treated Wood Charcoal and the Effect of Organic and Inorganic Parameters on Adsorption Capacity, 732

Nonuniform and Unsteady Solute Transport in Furrow Irrigation. I: Model Development, 1241

Fiber optics

Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706

Parametric Estimation for RC Flexural Members Based on Distributed Long-Gauge Fiber Optic Sensors, 1620

Fiber reinforced materials

Assessment of Thermal Damage in Hybrid Fiber-Reinforced Concrete, 1437

Behavior of Steel Fiber-Reinforced High-Strength Concrete Columns under Uniaxial Compression, 1728

Bond Behavior in Steel Fiber-Reinforced Concrete Zones under Static and Cyclic Loading: Experimental Evaluations and Analytical Modeling, 1417

Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706

Development of Fiber-Reinforced Cement-Based Composite Sheets for Structural Retrofit, 1405

Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194

Engineering Properties of Soils Reinforced by Short Discrete Polypropylene Fiber, 1493

Experimental Study and Theoretical Models on Compressive Properties of Ultrahigh Toughness Cementitious Composites, 1463

High-Pressure Isotropic Compression Tests on Fiber-Reinforced Cemented Sand, 861

Improvement on SIFCON Performance by Fiber Orientation and High-Volume Mineral Admixtures, 1466

Interface Shear Connection Analysis of Ultrahigh-Performance Fiber-Reinforced Concrete Composite Girders, 141

Investigation of Flexural Properties of Cement-Stabilized Macadam Reinforced with Polypropylene Fiber, 1489

Pullout Behavior of Steel Fibers in Self-Compacting Concrete, 1340

Shear Strength of Fiber-Reinforced Sands, 821

Steel Hexagonal Honeycomb Core Equivalent Elastic Moduli for Bridge Deck Sandwich Panels, 45

Structural Design of the DRL-10 Space Pavilion, 88

Fiber reinforced plastics

Design and Construction of Modern Bamboo Bridges, 145

Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235

Size Effects for Reinforced Concrete Beams Strengthened in Shear with CFRP Strips, 202

Fiber reinforced polymer

Analysis of Moment Redistribution in Fiber-Reinforced Polymer Plated RC Beams, 219

Analysis of Snap-Back Instability due to End-Plate Debonding in Strengthened Beams, 479

Analytical Investigation of Lateral Strength of Masonry Infilled RC Frames Retrofitted with CFRP, 1526

Analytical Model for Circular Normal- and High-Strength Concrete Columns Confined with FRP, 233

Analytical Model for FRP Confinement of Concrete Columns with and without Internal Steel Reinforcement, 245

Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188

Analytical Solution for Fracture Analysis of CFRP Sheet–Strengthened Cracked Concrete Beams, 580

Assessment of the Electromagnetic Disturbance of a Glass Fiber Reinforced Composite Fencing Structure, 239

Axial Load Capacity of Concrete-Filled FRP Tube Columns: Experimental versus Theoretical Predictions, 199

Behavior and Effectiveness of FRP Wrap in the Confinement of Large Concrete Cylinders, 234

Behavior and Modeling of Confined High-Strength Concrete, 201

Behavior of GFRP Reinforcing Bars Subjected to Extreme Temperatures, 211

Behavior of Large-Scale Rectangular Columns Confined with FRP Composites, 182

Bend Strength of FRP Stirrups: Comparison and Evaluation of Testing Methods, 177

Bond Performance of GFRP Bars in Tension: Experimental Evaluation and Assessment of *ACI 440 Guidelines*, 242

Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512

CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183

CFRP Repair of RC Beams with Shear-Span and Full-Span Corrosions, 208

Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198

Confinement Effectiveness of FRP in Retrofitting Circular Concrete Columns under Simulated Seismic Load, 230

Deflection Prediction for FRP-Strengthened Concrete Beams, 200

Development of Mechanical Anchor for CFRP Tendons Using Integrated Sleeve, 216

Dynamic Response of Retrofitted Masonry Walls for Blast Loading, 542

Effect of Geometric Discontinuities on Strains in FRP-Wrapped Columns, 189

Effect of Severe Environmental Exposures on CFRP Wrapped Concrete Columns, 184

Effective Repair for Corrosion Control Using FRP Wraps, 215

Effects of Loading Rate and Duration on Axial Behavior of Concrete Confined by Fiber-Reinforced Polymer Sheets, 190

Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185

Environmental Reduction Factors for GFRP Bars Used as Concrete Reinforcement: New Scientific Approach, 225

Evaluation of Bond Strength in Concrete Elements Externally Reinforced with CFRP Sheets and Anchoring Devices, 229

Evaluation of Masonry Deep Beams Externally Strengthened with CFRP Sheets, 191

Experimental Behavior of Carbon Fiber-Reinforced Polymer (CFRP) Sheets Attached to Concrete Surfaces Using CFRP Anchors, 194

Experimental Behavior of FRP Strengthened Masonry Arches, 207

Experimental Investigation of the Influence of Moisture on the Bond Behavior of FRP to Concrete Interfaces, 258

Experimental Investigation on Square High-Strength Concrete Short Columns Confined with AFRP Sheets, 210

Experimental Observation on the Effectiveness of Fiber Sheet Strip Stirrups in Concrete Beams, 226

Experimental Study of Normal- and High-Strength Concrete Confined with Fiber-Reinforced Polymers, 232

Experimental Study of Rectangular RC Columns Strengthened with CFRP Composites under Eccentric Loading, 221

Extending the Service Life of Electric Distribution and Transmission Wooden Poles Using a Wet Layup FRP Composite Strengthening System, 1537

Failure Mechanism of Empty and Concrete-Filled CFRP Box Beams, 209

Fatigue and Strength Evaluation of Two Glass Fiber-Reinforced Polymer Bridge Decks, 122

Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218

Fatigue Performance of Tension Steel Plates Strengthened with Prestressed CFRP Laminates, 237

FE Modeling of FRP-Repaired Planar Concrete Elements Subjected to Monotonic and Cyclic Loading, 247

Field Monitoring and Repair of a Glass Fiber-Reinforced Polymer Bridge Deck, 1516

Flax Fiber-Reinforced Glued-Laminated Timber in Tension Perpendicular to the Grain: Experimental Study and Probabilistic Analysis, 1436

Flexural Behavior of Continuous FRP-Reinforced Concrete Beams, 243

Flexural Response of Concrete Beams Prestressed with AFRP Tendons: Numerical Investigation, 241

Front and Side View Image Correlation Measurements on FRP to Concrete Pull-Off Bond Tests, 222

FRP Confinement of Tuff and Clay Brick Columns: Experimental Study and Assessment of Analytical Models, 235

FRP Strengthening of Full-Scale PC Girders, 228

FRP-Retrofitted URM Walls under In-Plane Shear: Review and Assessment of Available Models, 249

Full Torsional Behavior of RC Beams Wrapped with FRP: Analytical Model, 205

Grooving as Alternative Method of Surface Preparation to Postpone Debonding of FRP Laminates in Concrete Beams, 255

Improved Repair of Concrete Structures Using Polymer Concrete Patch and FRP Overlay, 1375

In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. I: Experimental Investigation, 250

In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. II: Finite-Element Model, 251

Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227

Investigation into the Effect of Bonding on FRP-Wrapped Cylindrical Concrete Columns, 246

Investigation of the Thermal Conductivity of Compacted Silts and Its Correlation to the Elastic Modulus, 1386

Lateral Out-of-Plane Strengthening of Masonry Walls with Composite Materials, 214

Mechanical Behavior of an Innovative Hybrid Beam Made of Glulam and Ultrahigh-Performance Concrete Reinforced with FRP or Steel, 197

Moving-Wheel Fatigue for Bridge Decks Strengthened with CFRP Strips Subject to Negative Bending, 253

New Approach for Modeling the Contribution of NSM FRP Strips for Shear Strengthening of RC Beams, 180

Nondestructive Testing of GFRP Bridge Decks Using Ground Penetrating Radar and Infrared Thermography, 131

Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256

Numerical Model for Tracing the Response of FRP-Strengthened RC Beams Exposed to Fire, 248

Numerical Modeling of Concrete-FRP Debonding Using a Crack Band Approach, 178

Out-of-Plane Flexural Performance of GFRP-Reinforced Masonry Walls, 192

Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213

Pullout Strength Models for FRP Anchors in Uncracked Concrete, 217

Reliability-Based Evaluation of Flexural Members Strengthened with Externally Bonded Fiber-Reinforced Polymer Composites, 1721

Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238

Seismic Rehabilitation of Corner RC Beam-Column Joints Using CFRP Composites, 244

Seismic Response of FRP-Upgraded Exterior RC Beam-Column Joints, 195

Shear Performance of RC Bridge Girders Reinforced with Carbon FRP Stirrups, 98

Shear Strength of Large Concrete Members with FRP Reinforcement, 240

Shear Strengthening of RC T-Beams Using Mechanically Anchored Unbonded Dry Carbon Fiber Sheets, 1497

Simple General Solution for Interfacial Stresses in Plated Beams, 220
Slenderness Effects on Circular CFRP Confined Reinforced Concrete Columns, 204
Static and Cyclic Out-of-Plane Response of Masonry Walls Strengthened Using Textile-Mortar System, 1475
Strengthening RC T-Beams Subjected to Combined Torsion and Shear Using FRP Fabrics: Experimental Study, 206
Stress-Strain Behavior of Concrete in Hybrid FRP-Concrete-Steel Double-Skin Tubular Columns, 1646
Structural Performance of CFRP-Strengthened RC Slabs in a Corrosive Environment, 261
Structural Upgrade Using Basalt Fibers for Concrete Confinement, 231
Study of Stress Intensity Factor of a Cracked Steel Plate with a Single-Side CFRP Composite Patching, 254
Sustained-Load and Fatigue Performance of a Hybrid FRP-Concrete Bridge Deck System, 260
Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212
Tests and Analysis of Cantilevered GFRP Tubular Poles with Partial Concrete Filling, 187
Tests on Seismically Damaged Reinforced Concrete Structural Walls Repaired Using Fiber-Reinforced Polymers, 236
Thermomechanical Behavior of Multifunctional GFRP Sandwich Structures with Encapsulated Photovoltaic Cells, 224
Time-Dependent Reliability Analysis of FRP Rehabilitated Pipes, 203
Unified Strength Model Based on Hoek-Brown Failure Criterion for Circular and Square Concrete Columns Confined by FRP, 193
Unreinforced Concrete Masonry Walls Strengthened with CFRP Sheets and Strips under Pendulum Impact, 252
Use of Mixed-Mode Fracture Interfaces for the Modeling of Large-Scale FRP-Strengthened Beams, 259
Wet Lay-Up Manufactured FRPs for Concrete and Masonry Repair: Influence of Water on the Properties of Composites and on Their Epoxy Components, 257

Fiberglass

Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235

Fibers

Analytical Model for Fiber-Reinforced Granular Soils under High Confining Stresses, 1448
Proportioning Design and Mechanical Properties Research of Polypropylene Fiber and Polymer Emulsion Reinforced Cement Mortar, 1364
Removal of TDS from Cooling Tower Water by Using EDTA-Modified Bagasse Fibers, 680
Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714
Shear Strength of Steel Fiber-Reinforced Ultrahigh-Performance Concrete Beams without Stirrups, 1743
Simple Plastic Model for Shear Critical SFRC Beams, 1647
State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181

Field tests

Assessing of Natural Attenuation and Intrinsic Bioremediation Rates at a Petroleum-Hydrocarbon Spill Site: Laboratory and Field Studies, 615
Assessment of a River Reach for Environmental Fluid Dynamics Studies, 1034
Design and Construction of Modern Bamboo Bridges, 145
Effect of Intermediate Diaphragms on Decked Bulb-Tee Bridge System for Accelerated Construction, 162
Extending the Service Life of Electric Distribution and Transmission Wooden Poles Using a Wet Layup FRP Composite Strengthening System, 1537
Field Tests on Pile-Supported Embankments over Soft Ground, 850
Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97
Real-Time Implementation of Model Predictive Control on Maricopa-Stanfield Irrigation and Drainage District's WM Canal, 1281
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176
Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854
Structural Behavior of a Pile-Supported Embankment, 777
Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103

Fills

Analytical Investigation of Lateral Strength of Masonry Infilled RC Frames Retrofitted with CFRP, 1526
Laboratory Evaluation of Moisture Susceptibility of Hot-Mix Asphalt Containing Cementitious Fillers, 1416
Measuring and Modeling Proportion-Dependent Stress-Strain Behavior of EPS-Sand Mixture, 34
Properties of SCC Produced with Limestone Filler or Viscosity Modifying Admixture, 1379
Tests and Analysis of Cantilevered GFRP Tubular Poles with Partial Concrete Filling, 187
Use of Lightweight ECS as a Fill Material to Control Approach Embankment Settlements, 1409

Filters

Alternating Direction Implicit Method-Based Nonlinear Filtering for Relative Orbit Estimation, 60
Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668
Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665
Model to Quantify Removal and Inactivation of Microorganisms Occluded in Effluent Wastewater Particles Using Filtration and Disinfection Systems, 739
Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916
Using Filtered and Semicontinuous High Rate GPS for Monitoring Deformations, 1775

Filtration

Assessment of Subballast Filtration under Cyclic Loading, 921
Evaluation of Apparatus for Membrane Cleaning Tests, 740
Modeling the Relationship between Capillary Suction Time and Specific Resistance to Filtration, 720

Modeling the Removal of Arsenic by Iron Oxide Coated Sand, 636
Pilot-Scale Evaluation of Chemical Cleaning Protocols for Organic and Biologically Fouled Microfiltration Membranes, 674
Rheological Characterization of Sludges during Belt Filtration Dewatering Using an Immobilization Cell, 721
Runoff Volume Reduction by a Level Spreader–Vegetated Filter Strip System in Suburban Charlotte, N.C., 1105
Simulation of Radial Collector Well in Shallow Alluvial Riverbed Aquifer Using Analytic Element Method, 1211
Volumetric Filtration of Rainfall Runoff. I: Event-Based Separation of Particulate Matter, 759
Volumetric Filtration of Rainfall Runoff. II: Event-Based and Interevent Nutrient Fate, 760

Financial factors

Economics and Finance for Engineers and Planners, 2238
Engineering Leadership and Management during Financial Crisis, 2062
Eurohypothec: Drafting a Common Mortgage for Europe, 1298
International Instruments on Housing Rights, 1294
Mechanisms for Transportation Infrastructure Investment in Developing Countries, 1927
Methodological Framework for Evaluation of Financial Viability of Public-Private Partnerships: Investment Risk Approach, 1188
Precedence-Preserving GAs Operators for Scheduling Problems with Activities' Start Times Encoding, 293
Scoring Approach to Construction Bond Underwriting, 410

Financing

Employing the Net Present Value-Consistent IRR Methods for PFI Contracts, 395
Selecting Infrastructure Delivery Modalities: No Time for Ideology or Semantics, 355
Theodore Burr and the Harrisburg Old Camelback Bridge, 2151

Fine-grained soils

Establishing Soil-Water Characteristic Curve of a Fine-Grained Soil from Electrical Measurements, 847

Finite difference method

Influence of Nonlinearity on the Stress Distribution in the Soil—Application to Road Engineering Problems, 1797
Nonuniform and Unsteady Solute Transport in Furrow Irrigation. I: Model Development, 1241
Numerical Simulation Software for Oil Sand Slurry Flow in Flexible Pipelines, 452

Finite element method

Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312
Analysis of Snap-Back Instability due to End-Plate Debonding in Strengthened Beams, 479
Assessing Reliability and Potentiality of Nonnuclear Portable Devices for Asphalt Mixture Density Measurement, 1442
Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627
Behavior of an Atypical Embankment on Soft Soil: Field Observations and Numerical Simulation, 778
Behavior of Hollow Tubular-Flange Girder Systems for Curved Bridges, 1624
Behavior of Prestressed Steel Beams, 1719
Bridge Model Updating Using Response Surface Method and Genetic Algorithm, 147
Compression Performance of Steel Pipelines with Welded Slip Joints, 1561
Concept and Finite-Element Modeling of New Steel Shear Connectors for Self-Centering Wall Systems, 481
Deformation and Cracking of Seepage Barriers in Dams due to Changes in the Pore Pressure Regime, 776
Design of Tall Formworks by a Finite-Element Model, 394
Determination of Shear and Bulk Moduli of Viscoelastic Solids from the Indirect Tension Creep Test, 565
Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578
Directional Effects of Shear Combined with Compression on Bridge Elastomeric Bearings, 101
Discontinuous Galerkin Finite-Element Method for Simulation of Flood in Crossroads, 992
Dynamic Instability of Functionally Graded Shells Using Higher-Order Theory, 515
Dynamic Response of Retrofitted Masonry Walls for Blast Loading, 542
Effect of Geometric Discontinuities on Strains in FRP-Wrapped Columns, 189
Effect of Intermediate Diaphragms on Decked Bulb-Tee Bridge System for Accelerated Construction, 162
Effect of Wall Flexibility on Dynamic Response of Concrete Rectangular Liquid Storage Tanks under Horizontal and Vertical Ground Motions, 1652
Elastic Buckling of Cold-Formed Thin-Walled Channel Beams with Drop Flanges, 1695
Elastoplastic Mesoscale Homogenization of Composite Materials, 520
Equilibrium-Based Finite-Element Formulation for the Geometrically Exact Analysis of Planar Framed Structures, 604
Equivalent Barge and Flotilla Impact Forces on Bridge Piers, 144
Estimating Subgrade Reaction Modulus for Transversely Isotropic Rock Medium, 880
Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials, 1407
Extension of the Touratier Kinematic Model to Large Strains, Displacements, and Rotations, 587
FE Modeling of FRP-Repaired Planar Concrete Elements Subjected to Monotonic and Cyclic Loading, 247
Finite Beam Element Considering Shear-Lag Effect in Box Girder, 570
Finite-Element Analysis and Vibration Testing of a Two-Span Masonry Arch Bridge, 1499
Finite-Element Analysis of Fluid-Structure Interaction in a Blast-Resistant Window System, 1636
Finite-Element Model Approach to Determine Support Conditions and Effective Layout for Concrete Block Paving, 1471
Finite-Element Model for Pretensioned Prestressed Concrete Girders, 1648

Finite-Element Modeling of Nonlinear Behavior of Masonry-Infilled RC Frames, 1635
Finite-Element Modeling of Short-Term Field Response of Composite Wood-Concrete Floors/Decks, 1677
Finite-Element Simulations of Full-Scale Modular-Block Reinforced Soil Retaining Walls under Earthquake Loading, 523
Flexural Response of Concrete Beams Prestressed with AFRP Tendons: Numerical Investigation, 241
Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536
Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111
Hydrological Effects of Bounding the Venice (Italy) Industrial Harbor by a Protection Cutoff Wall: Modeling Study, 1144
Implementation of a Critical State Two-Surface Model to Evaluate the Response of Geosynthetic Reinforced Pavements, 33
Influence of Flexibility on the Fatigue Performance of the Base Plate Connection in High-Mast Lighting Towers, 1639
In-Plane Behavior of Clay Masonry Walls: Experimental Testing and Finite-Element Modeling, 1742
In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. II: Finite-Element Model, 251
Installation and Axial Pullout of Suction Caissons: Numerical Modeling, 886
Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227
Investigation into the Effect of Bonding on FRP-Wrapped Cylindrical Concrete Columns, 246
Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129
Large Deformation Finite-Element Analysis of Submarine Landslide Interaction with Embedded Pipelines, 27
Linear Elastic Fracture Mechanics Pullout Analyses of Headed Anchors in Stressed Concrete, 533
Linear Viscoelastic Modeling for Hot-Poured Crack Sealants at Low Temperature, 1454
Load Configuration and Lateral Distribution of NATO Wheeled Military Trucks for Steel I-Girder Bridges, 165
Load Transfer Characteristics of Aggregate Interlocking in Concrete Pavement, 1810
Mesh Dependence and Nonlocal Regularization of One-Dimensional Strain Softening Plasticity, 594
Mesh-Independent Fracture Modeling for Overlay Pavement System under Heavy Aircraft Gear Loadings, 1828
Mesomechanical Model for Numerical Study of Two-Dimensional Triaxially Braided Composite, 595
Mixed Finite Element for Three-Dimensional Nonlinear Dynamic Analysis of Rectangular Concrete-Filled Steel Tube Beam-Columns, 592
Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672
Modeling and Behavior of Steel Plate Connections Subject to Various Fire Scenarios, 1696
Modeling of Ground Excavation with the Particle Finite-Element Method, 504
Modeling Skid Resistance of Commercial Trucks on Highways, 1842
Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626
Moment-Rotation Response of Slender Steel I-Girders, 1756
Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759
Monte–Carlo Based Method for Predicting Extreme Value Statistics of Uncertain Structures, 605
Multiobjective Groundwater Remediation System Design Using Coupled Finite-Element Model and Nondominated Sorting Genetic Algorithm II, 1091
New Multidimensional Visualization Technique for Limit-State Surfaces in Nonlinear Finite-Element Reliability Analysis, 597
Nonlinear Analysis of Masonry Arches Strengthened with Composite Materials, 557
Nonlinear Finite-Element Analysis for Hysteretic Behavior of Thin-Walled Circular Steel Columns with In-Filled Concrete, 1745
Nonlinear Finite-Element Analysis Software Architecture Using Object Composition, 271
Nonlinear Finite-Element-Based Investigation of the Effect of Bedding Thickness on Buried Concrete Pipe, 1873
Nonlinear, Large Deformation Finite-Element Beam/Column Formulation for the Study of the Human Spine: Investigation of the Role of Muscle on Spine Stability, 591
Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256
Numerical Study of an Integral Abutment Bridge Supported on Drilled Shafts, 96
Numerical/Experimental Correlation of a Plasma Wind Tunnel Test on a UHTC-Made Nose Cap of a Reentry Vehicle, 72
Optimal Layout of Gill Cells for Very Large Floating Structures, 1697
Performance of Geosynthetic-Encased Stone Columns in Embankment Construction: Numerical Investigation, 887
Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410
Probabilistic Analysis of Coupled Soil Consolidation, 814
Probabilistic Push-Over Analysis of Structural and Soil-Structure Systems, 1738
Progressive Collapse Resistance of Steel-Concrete Composite Floors, 1724
Quantitative Structural Health Monitoring by Ultrasonic Guided Waves, 551
Reduced Link Sections for Improving the Ductility of Eccentrically Braced Frame Link-to-Column Connections, 1662
Reduction-Based Model Updating of a Scaled Offshore Platform Structure, 472
Relationship between Probability of Breakage to Maximum Principal Stresses in Window Glass, 78
Seismic Behavior of Reinforced Concrete Exterior Wide Beam-Column Joints, 1608
Seismic Design and Analysis of Buried Culverts and Structures, 1575
Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854

Stability of Shallow Tunnel Using Rigid Blocks and Finite-Element Upper Bound Solutions, 38
Stack Pipe Model for Pipe Jacking Method, 382
Stochastic Free Vibration Response of Soft Core Sandwich Plates Using an Improved Higher-Order Zigzag Theory, 40
Structural Analyses and Assessment of Historical Kamanlı Mosque in Izmir, Turkey, 1531
Structural Design of the DRL-10 Space Pavilion, 88
Study of Stress Intensity Factor of a Cracked Steel Plate with a Single-Side CFRP Composite Patching, 254
Thermal Scale Modeling by FEM and Test, 41
Three-Dimensional Finite-Element Modeling of Nailed Connections in Wood, 1678
Three-Dimensional Large Deformation Finite-Element Analysis of Plate Anchors in Uniform Clay, 808
Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761
Undrained Bearing Capacity of Strip Footings on Slopes, 840
Undrained Capacity of Plate Anchors under General Loading, 908
Undrained Lateral Pile Response in Sloping Ground, 918
Upper Bound Plastic Interaction Relations for Elliptical Hollow Sections, 559
Use of Mixed-Mode Fracture Interfaces for the Modeling of Large-Scale FRP-Strengthened Beams, 259
Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

Fire resistance

Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423
High-Temperature Properties of Steel for Fire Resistance Modeling of Structures, 1388
Numerical Model for Tracing the Response of FRP-Strengthened RC Beams Exposed to Fire, 248

Fire safety

Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423
Development and Validation of 3D Composite Structural Elements at Elevated Temperatures, 1634

Fires

Capacity Reduction and Fire Load Factors for Design of Steel Members Exposed to Fire, 1758
Feasibility Study of Rotorcraft Fire Fighting for High-Rise Buildings, 58
Fire Design of Timber-Concrete Composite Slabs with Screwed Connections, 1629
Least-Cost Design of Water Distribution Networks Including Fire Damages, 2026
Local Buckling of Fire-Exposed Aluminum Members: New Design Model, 1612
Modeling and Behavior of Steel Plate Connections Subject to Various Fire Scenarios, 1696
Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Fish management

Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053
Influence of Mechanical Draft Tube Fish Barrier on the Hydraulic Thrust of Small Francis Turbines, 1038
Modeling Unsteady Flow Characteristics of Hydropeaking Operations and Their Implications on Fish Habitat, 1052
Thermal Reduction by an Underground Storm-Water Detention System, 671
Turbulent Flow near Vertical Angled Fish Screen, 1042
Watershed Management 2010, 2293

Fixed-bed models

Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas. I, 9

Flanges

Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674
Behavior of Hollow Tubular-Flange Girder Systems for Curved Bridges, 1624
Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751
Elastic Buckling of Cold-Formed Thin-Walled Channel Beams with Drop Flanges, 1695
Global Lateral Buckling of I-Shaped Girder Systems, 6
LRFD Factors for Pultruded Wide-Flange Columns, 1663
Shear Capacity of the Flange-Web Intersections of Brick Masonry Nonrectangular Sections, 1665

Flash floods

Effect of Flood Recession on Scouring at Bed Sills, 964
Flash Flooding in the Philadelphia Metropolitan Region, 1058

Flexible pavements

Average Treatment Effect for Modeling Maintenance Work, 1175
Field Verification of Superpave Dynamic Modulus, 1395
Global Optimization of Pavement Structural Parameters during Back-Calculation Using Hybrid Shuffled Complex Evolution Algorithm, 302
Interrater Reliability of Manual Pavement Distress Evaluations, 1807
Investigation of the Use of Lightweight Aggregate Hot-Mixed Asphalt in Flexible Pavements in Frost Susceptible Areas, 1358
Neural Network–Swarm Intelligence Hybrid Nonlinear Optimization Algorithm for Pavement Moduli Back-Calculation, 1844
New Layer-Moduli Back-Calculation Method Based on the Constrained Extended Kalman Filter, 1790
Using Fuzzy Logic and Expert System Approaches in Evaluating Flexible Pavement Distress: Case Study, 1805

Flexible pipes

Reliability Analysis of Buried Flexible Pipe-Soil Systems, 1565
Ring-Reinforced Pipelines: That Moment of Mystery, 1568

Flexural strength

Application of the Analytical Strip Method to Antisymmetric Laminates, 588
CFRP Repair of RC Beams with Shear-Span and Full-Span Corrosions, 208
Composite Flexural Behavior of Full-Scale Concrete-Filled Tubes without Axial Loads, 1744

Engineered Bamboo I-Joists, 1765
Experimental Study on Flexural Testing of Compacted Soil Beams, 1392
Flexural Behavior of Continuous FRP-Reinforced Concrete Beams, 243
FRP Strengthening of Full-Scale PC Girders, 228
Grooving as Alternative Method of Surface Preparation to Postpone Debonding of FRP Laminates in Concrete Beams, 255
Out-of-Plane Flexural Performance of GFRP-Reinforced Masonry Walls, 192
Stresses in External and Internal Unbonded Tendons: Unified Methodology and Design Equations, 1712
Tests and Analysis of Cantilevered GFRP Tubular Poles with Partial Concrete Filling, 187
Unified Flexural Resistance Equations for Stability Design of Steel I-Section Members: Overview, 8

Floating structures

Innovation in Ingleside, 2195
Optimal Layout of Gill Cells for Very Large Floating Structures, 1697
Passive Restraint System for Floating Docks with Large Water-Level Excursions, 2159

Flocculation

Assessment of Flocculation Kinetics of Cohesive Sediments from the Seine and Gironde Estuaries, France, through Laboratory and Field Studies, 2057
Modeling Particle-Size Distribution Dynamics during Precipitative Softening, 610
Reuse of Fruit Waste as Biopolymeric Flocculant and Optimizing Turbidity Reduction: Comparison Study with Industrial Flocculant, 752

Flood frequency

Local Polynomial–Based Flood Frequency Estimator for Mixed Population, 1123
Probability Analysis of Hydrological Loads for the Design of Flood Control Systems Using Copulas, 1092
Record Length Requirements for Annual Maximum Flood Series, 1126

Flood plains

Coupled 1D–Quasi-2D Flood Inundation Model with Unstructured Grids, 994
Impact of Bridge Rail Geometry on Floodplain Analysis, 1156
Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072
Rating Curves for Dam-Break Flows, 1061

Flood routing

Accuracy of Kinematic Wave and Diffusion Wave Approximations for Flood Routing. I: Steady Analysis, 7
Coupled 1D–Quasi-2D Flood Inundation Model with Unstructured Grids, 994
Derivation of Flood Hydrographs for Ungauged Upstream Subwatersheds Using a Main Outlet Hydrograph, 1160
Parameter Estimation for Nonlinear Muskingum Model Based on Immune Clonal Selection Algorithm, 1140
Rating Curves for Dam-Break Flows, 1061

Floods

Application of a Distributed Hydrologic Model to the November 17, 2004, Flood of Bull Creek Watershed, Austin, Texas, 1120
Assessment of Flooding Risk to Cultural Heritage in Historic Sites, 1539
Bridge Pier Scour under Flood Waves, 1031
Building Damage due to Riverine and Coastal Floods, 1992
Case Study: Flood Mitigation of the Muda River, Malaysia, 969
Celebrating Hoover Dam: Mission of Boulder Dam Fulfilled, 2218
Celebrating Hoover Dam: Significance of Boulder Canyon Project, 2217
Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries, 1067
Critical Assessment of Interstory Drift Measurements, 1760
Direct Joint Probability Method for Estimating Extreme Sea Levels, 2035
Discontinuous Galerkin Finite-Element Method for Simulation of Flood in Crossroads, 992
Empirical Relationship between Large Dams and the Alteration in Extreme Precipitation, 2087
Explaining Internal Behavior in a Fuzzy If-Then Rule-Based Flood-Forecasting Model, 1057
Field Damage Survey of New Orleans Homes in the Aftermath of Hurricane Katrina, 2078
Flood Damage to Historic Buildings and Structures, 1540
Flood Forecasting in Regulated Basins Using the Ensemble Extended Kalman Filter with the Storage Function Method, 1158
Flood Modeling in the Coastal Plains and Mountains: Analysis of Terrain Resolution, 2079
Flood Simulation Using a Well-Balanced Shallow Flow Model, 1011
Generalized Extreme Value versus Halphen System: Exploratory Study, 1065
Geotechnical Problems of Cultural Heritage due to Floods, 1541
Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542
Improving Flood Insurance and Flood-Risk Management: Insights from St. Louis, Missouri, 2094
Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086
Method of Superimposition for Suction Force on Trash Rack, 1285
Multiple Flood Source Expected Annual Damage Computations, 1991
Nondestructive Testing Evaluation of Drying Process in Flooded Full-Scale Masonry Walls, 1544
Novel Multiobjective Shuffled Frog Leaping Algorithm with Application to Reservoir Flood Control Operation, 1981
Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114
Parking Deck's First Flush, 1069
Performance Investigation of Nakagami-m Distribution to Derive Flood Hydrograph by Genetic Algorithm Optimization Approach, 1121
Performance of a Retrofitted Medieval Stone Bridge under a Severe Flood, 1545
Record Length Requirements for Annual Maximum Flood Series, 1126

Regional Frequency Analysis of Low Flow Based on L Moments: Case Study in Karst Area, Southwest China, 1093

Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045

So, You Live Behind a Levee! What you should know to protect your home and loved ones from floods, 2279

Theodore Burr and the Harrisburg Old Camelback Bridge, 2151

Using a Distributed Hydrologic Model to Evaluate the Location of Urban Development and Flood Control Storage, 2020

Valuation of Flood Reductions in the Yellow River Basin under Land Use Change, 1969

Floors

Behavior of Bidirectional Spring Unit in Isolated Floor Systems, 1700

Finite-Element Modeling of Short-Term Field Response of Composite Wood-Concrete Floors/Decks, 1677

In-Plane Experimental Testing of Timber-Concrete Composite Floor Diaphragms, 1750

Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

Progressive Collapse Resistance of Steel-Concrete Composite Floors, 1724

Slab-on-Grade versus Framed Slab, 94

Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761

Vibration Performance of Lightweight Cold-Formed Steel Floors, 1671

Vibration Serviceability of a Building Floor Structure. I: Dynamic Testing and Computer Modeling, 1546

Vibration Serviceability of a Building Floor Structure. II: Vibration Evaluation and Assessment, 1547

Florida

Approach Using Active Groundwater Storage for Hydrologic Model Calibration in West-Central Florida, 1205

The Art of Parking, 2211

Below-Average Bidding Method, 408

Case Study on the Accuracy and Cost/Effectiveness in Simulating Reference Evapotranspiration in West-Central Florida, 1125

Climate Links and Variability of Extreme Sea-Level Events at Key West, Pensacola, and Mayport, Florida, 2061

Estimating Reference Evapotranspiration with Minimum Data in Florida, 1254

Hurricane Response of Nearshore Borrow Pits from Airborne Bathymetric Lidar, 2033

Influence of Physical Forcing on Bottom-Water Dissolved Oxygen within Caloosahatchee River Estuary, Florida, 725

Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida, 1976

Truncating Cross-Sectional Groundwater Models under Wetlands, 1110

Flow

Two-Dimensional Simulation of Subcritical Flow at a Combining Junction: Luxury or Necessity?, 1024

Flow control

Toll Plaza Merging Traffic Control for Throughput Maximization, 1796

Flow distribution

Turbulent Flow near Vertical Angled Fish Screen, 1042

Flow duration

Designing Storm-Water Controls to Promote Sustainable Ecosystems: Science and Application, 1106

Hydrospatial Approach to Assist Decision Making on Reservoir Protection Zones, 1087

Modeling and Sizing Bioretention Using Flow Duration Control, 1097

Flow measurement

Experimental Study of Sand and Slurry Jets in Water, 1017

Near-Transducer Errors in ADCP Measurements: Experimental Findings, 971

Planform and Flexibility on Lift Characteristics for Flow over Low-Aspect Ratio Wings, 44

Subcritical Contraction for Improved Open-Channel Flow Measurement Accuracy with an Upward-Looking ADVM, 1269

Flow patterns

Flow Pattern for a Silo with Two Layers of Materials with Single or Double Openings, 899

Flow profiles

Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987

Flow rates

Analytical Study of Water Table Fluctuation in Unconfined Aquifers due to Varying Bed Slopes and Spatial Location of the Recharge Basin, 1147

Flow resistance

Influence of Relative Roughness and Reynolds Number on the Roll-Waves Spatial Evolution, 943

Remarks on Camp's Criterion for Self-Cleansing Storm Sewers, 1216

Riparian Vegetation Mapping for Hydraulic Roughness Estimation Using Very High Resolution Remote Sensing Data Fusion, 1032

Turbulent Flow through Idealized Emergent Vegetation, 1048

Velocity Profile and Flow Resistance Models for Developing Chute Flow, 989

Flow simulation

Lattice Boltzmann Model for the Simulation of Flows in Open Channels with Application to Flows in a Submerged Sluice Gate, 1288

Numerical Modeling of River Flow for Ecohydraulic Applications: Some Experiences with Velocity Characterization in Field and Simulated Data, 1050

Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size, 771

Fluid dynamics

Assessment of a River Reach for Environmental Fluid Dynamics Studies, 1034

Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423

Fluid flow

Planform and Flexibility on Lift Characteristics for Flow over Low-Aspect Ratio Wings, 44

Fluid mechanics
Manifold Flow in Pressure-Distribution Systems, 1576

Fluidized bed technology
Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682
Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713

Fluid-structure interactions
Finite-Element Analysis of Fluid-Structure Interaction in a Blast-Resistant Window System, 1636
Modeling Skid Resistance of Commercial Trucks on Highways, 1842
Response of an Elastic Structure Subject to Air Shock Considering Fluid-Structure Interaction, 59

Flumes
Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003
Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812
One-Dimensional Study on Propagation of Tsunami Wave in River Channels, 950
Particle Fluxes into Permeable Sediments: Comparison of Mechanisms Mediating Deposition, 965
Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004

Flushing
Modeling the Effect of Flow Structure Selection on Residence Time in an Artificial Canal System: Case Study, 2037
Planning Unidirectional Flushing Operations as a Response to Drinking Water Distribution System Contamination, 2025

Flutter
Dynamic Instability of Nanorods/Nanotubes Subjected to an End Follower Force, 563
Flutter Control of Smart Composite Structures in Hygrothermal Environment, 73
Flutter of a Swept Aircraft Wing with a Powered Engine, 65
Structural Uncertainty Effect on Classical Wing Flutter Characteristics, 74

Fluvial hydraulics
Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997
Predictive Modeling of Transient Storage and Nutrient Uptake: Implications for Stream Restoration, 1049
Sediment Transport on Arbitrary Slopes: Simplified Model, 974

Fly ash
Characterization of Fly Ash Bituminous Concrete Mixes, 1481
Comparison of Mechanical Properties for Polymer Concrete with Different Types of Filler, 1419
Contaminant Leaching from Stabilized/Solidified Acid Tars, 764
Effects of Calcium Carbide Residue–Fly Ash Binder on Mechanical Properties of Concrete, 1474
Evaluation of Surface Water Runoff from Fly Ash–Stabilized and Nonstabilized Soil Surfaces, 716
Feasibility of Using Coal Fly Ash for Mine Waste Containment, 690
Improvement of Problematic Soils by Lime Slurry Pressure Injection: Case Study, 915
Improvement on SIFCON Performance by Fiber Orientation and High-Volume Mineral Admixtures, 1466
Influence of Fly Ash on Unconfined Compressive Strength of Cement-Admixed Clay at High Water Content, 1345
Kinetics of SO_2 Absorption with Fly Ash Slurry with Concomitant Production of a Useful Wastewater Coagulant, 645
Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes, 1389
Optimum Percentage of Fly Ash Reinforcement in Vinyl Ester Composites, 1351
Performance of a Stabilized Aggregate Base Subject to Different Durability Procedures, 1397
Use of High Fineness of Fly Ash to Improve Properties of Recycled Aggregate Concrete, 1404
Using Fly Ash, Clay, and Fibers for Simultaneous Improvement of Concrete Green Strength and Consolidatability for Slip-Form Pavement, 1361

Foam
Damping Parameter Identification and Study of Metal Foam Filled Steel Tube, 1384
Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532
Evaluation of Geofoam as a Geotechnical Construction Material, 1357
Investigation of the Curing Mechanism of Foamed Asphalt Mixes Based on Micromechanics Principles, 1343
Numerical Modeling of Geofoam Embankments, 802
Thermomechanical Behavior of Multifunctional GFRP Sandwich Structures with Encapsulated Photovoltaic Cells, 224

Footings
Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512
Nonlinear Cone Penetration Test-Based Method for Predicting Footing Settlements on Sand, 813
Slab-on-Grade versus Framed Slab, 94
Undrained Bearing Capacity of Strip Footings on Slopes, 840

Force
Force Finding of Tensegrity Systems Using Simulated Annealing Algorithm, 1709

Forecasting
Application of Partial Least-Squares Regression in Seasonal Streamflow Forecasting, 1116
Comparing Sigmoid Transfer Functions for Neural Network Multistep Ahead Streamflow Forecasting, 1085
Comparison of Multivariate Regression and Artificial Neural Networks for Peak Urban Water-Demand Forecasting: Evaluation of Different ANN Learning Algorithms, 1130
Contemporaneous Time Series and Forecasting Methodologies for Predicting Short-Term Productivity, 418
Cross-Validation of Short-Term Productivity Forecasting Methodologies, 417
Estuarine and Coastal Modeling, 2241
Explaining Internal Behavior in a Fuzzy If-Then Rule-Based Flood-Forecasting Model, 1057

Flood Forecasting in Regulated Basins Using the Ensemble Extended Kalman Filter with the Storage Function Method, 1158
Forecasting Construction Manpower Demand by Gray Model, 443
Forecasting Cybercar Use for Airport Ground Access: Case Study at Baltimore Washington International Airport, 1938
Frequency of Change Orders in Highway Construction Using Alternate Count-Data Modeling Methods, 403
Groundwater Level Prediction Using SOM-RBFN Multisite Model, 1117
Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086
Long-Lead Water Supply Forecast Using Large-Scale Climate Predictors and Independent Component Analysis, 1131
Long-Range Facility Planning Based on Dynamic Programming for Optimum Combined Cost and Probability Paths, 1562
Modeling Construction Occupational Demand: Case of Hong Kong, 413
Parameter Estimation for Nonlinear Muskingum Model Based on Immune Clonal Selection Algorithm, 1140
Performance of Combined Double Seasonal Univariate Time Series Models for Forecasting Water Demand, 1078
Probabilistic Forecasting of Project Duration Using Kalman Filter and the Earned Value Method, 398
Real-Time Hydraulic and Hydrodynamic Model of the St. Clair River, Lake St. Clair, Detroit River System, 995
Reliability Assessment for Operational Wave Forecasting System in Prince William Sound, Alaska, 2060
Seasonal Residential Water Demand Forecasting for Census Tracts, 1961
Short-Term Prediction of Urban Traffic Variability: Stochastic Volatility Modeling Approach, 1853
Three-Stage Least-Squares Analysis of Time and Cost Overruns in Construction Contracts, 434
Travelers' Response to Value Pricing: Application of Departure Time Choices to TRANSIMS, 1875
Water Well Resonance Induced by Preearthquake Signals, 575

Forensic engineering

Building Robustness Research during World War II, 1549
Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423
Forensic Engineering 2009, 2245
Forensic Examination of a Noncomposite Adjacent Precast Prestressed Concrete Box Beam Bridge, 133
Indo-U.S. Forensic Practices, 2260
On the Job versus Graduate School Training of Forensic Engineers—An Instructor and Professional Engineer's View, 1503
Reducing Brittle and Fatigue Failures in Steel Structures, 2274
Volumetric Filtration of Rainfall Runoff. I: Event-Based Separation of Particulate Matter, 759

Fouling

Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665
Pilot-Scale Evaluation of Chemical Cleaning Protocols for Organic and Biologically Fouled Microfiltration Membranes, 674

Foundation settlement

Nonlinear Cone Penetration Test-Based Method for Predicting Footing Settlements on Sand, 813

Foundations

Art of Foundation Engineering Practice (GSP 198), 2226
Consolidation beneath Circular Skirted Foundations, 14
Electrical Transmission and Substation Structures 2009, 2240
Experimental Investigation of Clear-Water Local Scour of Compound Piers, 979
GeoFlorida 2010, 2247
GeoTrends, 2249
Influence of Relative Density of Soil on Performance of Geocell-Reinforced Sand Foundations, 1400
Interactive and Dynamic Integrated Module for Mobile Cranes Supporting System Design, 332
Seismic Column Demands in Ductile Braced Frames, 2
A Solid Foundation, 2209
Vertical Vibrations of a Rigid Foundation Embedded in a Poroelastic Half Space, 497

Frames

Adaptive Harmony Search Method for Structural Optimization, 1650
Analysis of Residential Framing Accidents, Activities, and Task Demands, 341
Analytical Investigation of Lateral Strength of Masonry Infilled RC Frames Retrofitted with CFRP, 1526
CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183
End Forces on Crossframes in Horizontally Curved Steel I-Girder Bridges, 2130
Equilibrium-Based Finite-Element Formulation for the Geometrically Exact Analysis of Planar Framed Structures, 604
Estimating the Stiffness of Eccentrically Braced Frames, 2139
Experimental Seismic Response of a Full-Scale Six-Story Light-Frame Wood Building, 1732
Experimental Study on Full-Scale Light Frame Wood House under Lateral Load, 1687
Finite-Element Modeling of Nonlinear Behavior of Masonry-Infilled RC Frames, 1635
Geometrically Nonlinear Analysis of Plane Frames Subjected to Temperature Changes, 1739
Horizontal Wind Loads on Open-Frame, Low-Rise Buildings, 1615
Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672
Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685
Parallel Axial-Flexural Hinge Model for Nonlinear Dynamic Progressive Collapse Analysis of Welded Steel Moment Frames, 1623
Performance-Based Procedure for Direct Displacement Design of Engineered Wood-Frame Structures, 1704
Progressive Collapse Mechanisms of Brittle and Ductile Framed Structures, 556
Reduced Link Sections for Improving the Ductility of Eccentrically Braced Frame Link-to-Column Connections, 1662
Safety Assessment of a Steel Frame Using LRFD and SBRA Methods, 2136

Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718

Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689

Structural System Parameter Selection Based on Collapse Potential of Buildings in Earthquakes, 1699

Tensile Membrane Structure, 2287

Three-Dimensional Seismic Response of a Full-Scale Light-Frame Wood Building: Numerical Study, 1611

Wood Materials, Nails, and Sheathing Connections from Early 20th Century Residential Buildings, 1469

France

Assessment of Flocculation Kinetics of Cohesive Sediments from the Seine and Gironde Estuaries, France, through Laboratory and Field Studies, 2057

Fugitive Methane Emissions from Landfills: Field Comparison of Five Methods on a French Landfill, 701

Housing Law Is Dead. Long Live European Housing Law?, 1295

Supervised Gain-Scheduling Multimodel versus Linear Parameter Varying Internal Model Control of Open-Channel Systems for Large Operating Conditions, 1260

Free flow

Flow over Gabion Weirs, 1265

Hydraulic Relations for Clinging Flow of Sharp-Crested Weir, 984

Free surfaces

Undular Tidal Bores: Basic Theory and Free-Surface Characteristics, 1041

Freeze and thaw

Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Effective Curve Number and Hydrologic Design of Pervious Concrete Storm-Water Systems, 1102

New Approach for Surface n Factors, 169

Permafrost Weakening as a Potential Impact of Climatic Warming, 168

Proposed Behavioral Model for Deicer Scaling Resistance of Slag Cement Concrete, 1380

Selection of Durable Closure Pour Materials for Accelerated Bridge Construction, 160

Sensitivity of Untreated Reclaimed Asphalt Pavement to Moisture, Density, and Freeze Thaw, 1487

Freezing

Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449

New Approach for Surface n Factors, 169

Permafrost Weakening as a Potential Impact of Climatic Warming, 168

Practical Melting Forecasting of Artificial Snow Made from Treated Wastewater, 173

Freight transportation

Capsule Separation by Linear Induction Motor in Pneumatic Capsule Pipeline Freight Transport System, 1571

Containing the Constraints, 2190

ICCTP 2010, 2257

Kernel-Based Machine Learning Models for Predicting Daily Truck Volume at Seaport Terminals, 1911

Modeling Road Traffic Demand of Container Consolidation in a Chinese Port Terminal, 1883

Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. I: Theory, 1864

Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. II: Applications, 1865

Frequency

Complex Frequencies in Elastodynamics, with Application to the Damping-Solvent Extraction Method, 522

Contractors' Competition Strategies in Bidding: Hong Kong Study, 420

Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26

Tall Building Response Parameters: Sensitivity Study Based on Orthogonal Factorial Experiment Design Technique, 1622

Frequency analysis

Analysis of Frequency Nonstationarity via Continuous Wavelet Transform in the Response of Primary-Secondary Systems, 1763

Frequency Analysis Incorporating a Decision Support System for Hydroclimatic Variables, 1143

Frequency Methodology for Evaluating Urban and Highway Storm-Water Quality Control Infiltration BMPs, 1983

Frequency of Change Orders in Highway Construction Using Alternate Count-Data Modeling Methods, 403

Generalized Extreme Value versus Halphen System: Exploratory Study, 1065

Multiscale Wavelet-LQR Controller for Linear Time Varying Systems, 573

Probability Analysis of Hydrological Loads for the Design of Flood Control Systems Using Copulas, 1092

Regional Frequency Analysis of Low Flow Based on L Moments: Case Study in Karst Area, Southwest China, 1093

Valuation of Flood Reductions in the Yellow River Basin under Land Use Change, 1969

Frequency distribution

Frequency Distribution of Extreme Hydrologic Drought of Southeastern Semiarid Region, Iran, 1083

Frequency response

Frequency-Domain Modeling of Transients in Pipe Networks with Compound Nodes Using a Laplace-Domain Admittance Matrix, 1018

Modeling Unsteady Open-Channel Flow for Controller Design, 1243

New Dynamic Participation Factor for Turbine-Generator Foundations, 2135

Practical Formulas for Frequency Domain Analysis of Earthquake-Induced Dam-Reservoir Interaction, 470

Fresh water

Preserving Our Water Resources, 2162

Friction

Can Soil Arching Be Insensitive to ϕ?, 24

Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509

Characterization of a Roller Seismic Isolation Bearing with Supplemental Energy Dissipation for Highway Bridges, 1658

Determination of Form Friction Factor, 1080

Dilatancy and Shear Strength of Sand at Low Confining Pressures, 825

Drainability of Permeable Friction Course Mixtures, 1403

Estimation of Friction Factor in Open Channels, 1082

Exact Sensitivity Equation for One-Dimensional Steady-State Shallow Water Flow (Application to Model Calibration), 1150

Experimental Study of Particle Motion on a Smooth Bed under Shoaling Waves Using Particle Image Velocimetry, 543

Flood Simulation Using a Well-Balanced Shallow Flow Model, 1011

Influence of Relative Roughness and Reynolds Number on the Roll-Waves Spatial Evolution, 943

Installation and Axial Pullout of Suction Caissons: Numerical Modeling, 886

Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. I: Theory, 1864

Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. II: Applications, 1865

Nonconservative Formulation of Unsteady Pipe Flow Model, 993

Numerical Simulation of Damage Localization in Polyester Mooring Ropes, 552

Self-Aeration and Friction over Rock Chutes in Uniform Flow Conditions, 1044

Sensitivity of Model Parameter on Dynamic Behavior Simulation of HPC, 1485

Simple Model for the Cyclic Behavior of Smooth Sand-Steel Interfaces, 874

Theoretical Studies of the XY-FP Seismic Isolation Bearing for Bridges, 154

Frost

Below-Ground Performance of Rigid Polystyrene Foam Insulation: Review of Effective Thermal Resistivity Values Used in ASCE Standard 32-01—Design and Construction of Frost-Protected Shallow Foundations, 170

Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449

Froude number

Accuracy of Kinematic Wave and Diffusion Wave Approximations for Flood Routing. I: Steady Analysis, 7

Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987

Enhancing Utility of Submerged Vanes with Collar, 1008

Estimation of Friction Factor in Open Channels, 1082

Frozen soils

Investigation on the Impact of Seasonally Frozen Soil on Seismic Response of Bridge Columns, 139

Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449

Full-scale tests

Acceleration Tracking Performance of the UCSD-NEES Shake Table, 1656

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Experimental Investigations, 1643

Dynamic Response of Retrofitted Masonry Walls for Blast Loading, 542

Effect of Fabric Webs on the Static Response of Spindle-Shaped Tensairity Columns, 1649

Experimental Study on Full-Scale Light Frame Wood House under Lateral Load, 1687

Finite-Element Analysis of Fluid-Structure Interaction in a Blast-Resistant Window System, 1636

Full-Scale Field Testing for Verification of Mechanical Properties of Polyurethane Foams for Use as Backfill in PCC Repairs, 1367

Investigation of Laboratory Procedure for Evaluating Chemical Dust Palliative Performance, 1472

Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932

Micromechanical Aspects of Liquefaction-Induced Lateral Spreading, 32

Reduction Factor for the Unloading Point Method at Clay Soil Sites, 837

Shakedown Approaches to Rut Depth Prediction in Low-Volume Roads, 600

"Three Little Pigs" Project: Hurricane Risk Mitigation by Integrated Wind Tunnel and Full-Scale Laboratory Tests, 2093

Furrow irrigation

Modified Horton's Equation to Model Advance Trajectory in Furrow Irrigation Systems, 1227

Nonuniform and Unsteady Solute Transport in Furrow Irrigation. I: Model Development, 1241

Fuzzy sets

Box-and-Ellipse-Based ANFIS for Bridge Coating Assessment, 297

Condition Assessment of Corrosion-Distressed Reinforced Concrete Buildings Using Fuzzy Logic, 1552

Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708

Developing a Fuzzy Risk Allocation Model for PPP Projects in China, 404

Dual-Interval Fuzzy Stochastic Programming Method for Long-Term Planning of Municipal Solid Waste Management, 279

Explaining Internal Behavior in a Fuzzy If-Then Rule-Based Flood-Forecasting Model, 1057

Fuzzy Genetic Approach for Modeling Reference Evapotranspiration, 1219

Fuzzy Nonlinear Regression Approach to Stage-Discharge Analyses: Case Study, 1060

Hierarchical Fuzzy Expert System for Risk of Failure of Water Mains, 1567

Integrated Fuzzy Ranking Analysis for Assessing the Quality of Composting Products, 670

Integrating Neurofuzzy System with Conceptual Cost Estimation to Discover Cost-Related Knowledge from Residential Construction Projects, 265

Neurofuzzy Decision Support System for Efficient Risk Allocation in Public-Private Partnership Infrastructure Projects, 310

Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326

Risk Evaluation for Maxi Horizontal Directional Drilling Crossing Projects, 1572

Risk Management in the Construction Industry Using Combined Fuzzy FMEA and Fuzzy AHP, 416
Selecting Appropriate Project Delivery System: Fuzzy Approach with Risk Analysis, 407
Stability Characteristics for Transport Aircraft Response to Clear-Air Turbulence, 61
SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractors for Bonding, 435
Using Fuzzy Logic and Expert System Approaches in Evaluating Flexible Pavement Distress: Case Study, 1805

Gas

Catalytic Decomposition of CFC-12 over Solid Super Acid Mo_2O_3/ZrO_2, 770
Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas. I, 9
Removal of Trichlorobenzene from Flue Gas Using Complex Absorbent, 767
Tire-Derived Steel for Hydrogen Sulfide Removal in Landfill Cover, 2118

Gasoline

Diesel Particulate Matter Number Emissions: Evaluation of Existing Modal Emission Modeling Approaches, 1799

Gates

Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268
High-Resolution Method for Modeling Hydraulic Regime Changes at Canal Gate Structures, 1287
Hydrodynamic Forces on Spillway Torque-Tube Gates, 1013
Influence of Mechanical Draft Tube Fish Barrier on the Hydraulic Thrust of Small Francis Turbines, 1038
Lattice Boltzmann Model for the Simulation of Flows in Open Channels with Application to Flows in a Submerged Sluice Gate, 1288

Gaussian process

Kernel-Based Machine Learning Models for Predicting Daily Truck Volume at Seaport Terminals, 1911
Method of Up-Slope Mitigation Priority for Alishan Mountain Road in Taiwan, 1533
Stochastic Simulation of Non-Gaussian 3D Conductivity Fields in a Fractured Medium with Multiple Statistical Populations: Case Study, 1112

Geodetic surveys

Clarifying the Relationship between Quality of Global Positioning System Data and Precision of Positioning, 1771
Evaluation and Adaptation of the EGM2008 Geopotential Model along the Northern Nile Valley, Egypt: Case Study, 1770
HTDP 3.0: Software for Coping with the Coordinate Changes Associated with Crustal Motion, 1776
Identification of Nearshore Wave Characteristics Using Robotic Total Stations, 1787
Median-Based Estimates and Their Application in Controlling Reference Mark Stability, 1772
Modern Determination of Vertical Deflections Using Digital Zenith Cameras, 1766
Noniterative Approach for Solving the Indirect Problems of Linear Reference Frame Transformations, 1784
Statistical Properties of Strain and Rotation Tensors in Geodetic Network, 1778

Geographic information systems

Assessment of Link Reliability as a Function of Congestion Components, 1886
Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries, 1067
Determining the Sediment Delivery Ratio Using the Sediment-Rating Curve and a Geographic Information System–Embedded Soil Erosion Model on a Basin Scale, 1139
Estimation of Slope Length Value of RUSLE Factor L Using GIS, 1128
Evaluation of Methods for Representing Urban Terrain in Storm-Water Modeling, 1055
Flood Modeling in the Coastal Plains and Mountains: Analysis of Terrain Resolution, 2079
Global Navigation Satellite System Ambiguity Resolution with Constraints from Normal Equations, 1774
Hydrospatial Approach to Assist Decision Making on Reservoir Protection Zones, 1087
Identifying Critical Sources of Bridge Deterioration in Cold Regions through the Constructed Bridges in North Dakota, 146
Integration of GIS and Data Mining Technology to Enhance the Pavement Management Decision Making, 1825
Knowledge-Based Model for Supplementary Irrigation Assessment in Agricultural Watersheds, 1242
Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072
Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289
Multiobjective Transit Passenger Information System Design Using GIS, 1920
Preventing Sewer Blowouts during High-Velocity Jet Cleaning Operations, 1191
Quantitative Delimitation of Metropolitan Areas Based on a Synthetic Method: Case Study in the Lanzhou Metropolitan Area, 1956
River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977
River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978
SCIA: GIS-Based Software for Assessing the Impacts from Chemical Industrial Accidents, 2106
Spatial Decision Support System for Urban Planning: Case Study of Harbin City in China, 1933
Using Filtered and Semicontinuous High Rate GPS for Monitoring Deformations, 1775
Using GPS Data to Gain Insight into Public Transport Travel Time Variability, 1855

Geogrids

Exhumed Geogrid-Reinforced Retaining Wall, 902
Flood Modeling in the Coastal Plains and Mountains: Analysis of Terrain Resolution, 2079
Structural Behavior of a Pile-Supported Embankment, 777

Geology

Stochastic Simulation of Non-Gaussian 3D Conductivity Fields in a Fractured Medium with Multiple Statistical Populations: Case Study, 1112

Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth, 917

Geomaterials

Experimental Evaluation of Strength Characteristics of Stabilized Dredged Soil, 1401

Transformation of the Sandler and Rubin Nonsmooth Cap Model to the Pelessone Smooth Cap Model, 526

Geomembranes

Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865

Diffusive Transport of VOCs through LLDPE and Two Coextruded Geomembranes, 889

Effects of Thickness on the Aging of HDPE Geomembranes, 803

Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Geometry

Assessing the Accuracy of Applying Photogrammetry to Take Geometric Measurements on Building Products, 339

Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries, 1067

Determining Thermal Conductivity of Paving Materials Using Cylindrical Sample Geometry, 1360

Development of Railway Track Geometry Indexes Based on Statistical Distribution of Geometry Data, 1862

Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997

Engineering the Tower and Main Span Construction of Stonecutters Bridge, 108

Equilibrium-Based Finite-Element Formulation for the Geometrically Exact Analysis of Planar Framed Structures, 604

Geometrically Nonlinear Analysis of Plane Frames Subjected to Temperature Changes, 1739

Hydraulic Geometry Relations for Stable Channel Design, 1142

Impact of Bridge Rail Geometry on Floodplain Analysis, 1156

Modeling of Ground Excavation with the Particle Finite-Element Method, 504

Research on a Short-Range Prediction Model for Track Irregularity over Small Track Lengths, 1905

Stability of Stones under Uniform Flow, 954

Structural Design of the DRL-10 Space Pavilion, 88

Vision-Based Roadway Geometry Computation, 1814

Geomorphology

Designing Storm-Water Controls to Promote Sustainable Ecosystems: Science and Application, 1106

Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997

Modeling and Sizing Bioretention Using Flow Duration Control, 1097

Georgia

Critical Assessment of Pavement Distress Segmentation Methods, 1789

Geosynthetics

Consolidation of a Geosynthetic Clay Liner under Isotropic States of Stress, 798

Development and Validation of a Two-Phase Model for Reinforced Soil by Considering Nonlinear Behavior of Matrix, 530

Effect of Sand Columns on the Undrained Load Response of Soft Clays, 898

Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532

Field Assessment of the Performance of a Ballasted Rail Track with and without Geosynthetics, 863

Finite-Element Simulations of Full-Scale Modular-Block Reinforced Soil Retaining Walls under Earthquake Loading, 523

Ground Improvement and Geosynthetics (GSP 207), 2251

Implementation of a Critical State Two-Surface Model to Evaluate the Response of Geosynthetic Reinforced Pavements, 33

Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852

Performance of Geosynthetic-Encased Stone Columns in Embankment Construction: Numerical Investigation, 887

Required Unfactored Strength of Geosynthetic in Reinforced Earth Structures, 801

Studies on the Behavior of Single and Group of Geosynthetic Encased Stone Columns, 786

Thickness and Hydraulic Performance of Geosynthetic Clay Liners Overlying a Geonet, 828

Geotechnical engineering

Algorithm to Generate a Discrete Element Specimen with Predefined Properties, 20

Art of Foundation Engineering Practice (GSP 198), 2226

Geoenvironmental Engineering and Geotechnics (GSP 204), 2246

GeoFlorida 2010, 2247

Geotechnical Problems of Cultural Heritage due to Floods, 1541

Geotechnical Properties of JSC-1A Lunar Soil Simulant, 51

Geotechnical Properties of NT-LHT-2M Lunar Highland Simulant, 63

GeoTrends, 2249

Germany

Comparative Analysis of Compact Multilane Roundabouts and Turbo-Roundabouts, 1823

Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542

Impact of the EU Mediation Directive on the German Construction Sector, 1307

Probability Analysis of Hydrological Loads for the Design of Flood Control Systems Using Copulas, 1092

Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Ghana

Groundwater Classification Using Multivariate Statistical Methods: Birimian Basin, Ghana, 765

Girders

Behavior of Hollow Tubular-Flange Girder Systems for Curved Bridges, 1624

Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509

End Forces on Crossframes in Horizontally Curved Steel I-Girder Bridges, 2130

Finite-Element Model for Pretensioned Prestressed Concrete Girders, 1648

Global Lateral Buckling of I-Shaped Girder Systems, 6

Moment-Rotation Response of Slender Steel I-Girders, 1756

Unified Flexural Resistance Equations for Stability Design of Steel I-Section Members: Overview, 8

Glass

Assessment of the Electromagnetic Disturbance of a Glass Fiber Reinforced Composite Fencing Structure, 239

Characterization of the Residual Stress State in Commercially Fully Toughened Glass, 1359

Flexural Behavior of Continuous FRP-Reinforced Concrete Beams, 243

High Displacement Glass Seismic Systems, 2146

Investigating the Alkali-Silica Reaction of Recycled Glass Aggregates in Concrete Materials, 1480

A New Angle, 2194

Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213

Steel Hexagonal Honeycomb Core Equivalent Elastic Moduli for Bridge Deck Sandwich Panels, 45

Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212

Time-Dependent Behavior of Laminated Glass, 1383

Glass fibers

Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198

Fatigue and Strength Evaluation of Two Glass Fiber-Reinforced Polymer Bridge Decks, 122

Field Monitoring and Repair of a Glass Fiber-Reinforced Polymer Bridge Deck, 1516

Global positioning systems

Clarifying the Relationship between Quality of Global Positioning System Data and Precision of Positioning, 1771

Deformation Detection in the GPS Real-Time Series by the Multiple Kalman Filters Model, 1785

Detection of Terrain Morphologic Features Using GPS, TLS, and Land Surveys: "Tana della Volpe" Blind Valley Case Study, 1782

Integrating Global Positioning System with Laser Technology to Capture As-Built Information during Open-Cut Construction, 1580

Interpolating Surface Gravity Data for Assessing the Accuracy of a Ground Inertial Navigation System/Global Positioning System Gravimetric System, 1783

OPUS-RS Pair Points: Case Study, 1777

Global warming

Permafrost Weakening as a Potential Impact of Climatic Warming, 168

Government

Developing a Fuzzy Risk Allocation Model for PPP Projects in China, 404

Graduate study

Graduate Education in Construction Management, 1599

"If These Women Can Do It, I Can Do It, Too": Building Women Engineering Leaders through Graduate Peer Mentoring, 2076

On the Job versus Graduate School Training of Forensic Engineers—An Instructor and Professional Engineer's View, 1503

Grain size

Algorithm to Generate a Discrete Element Specimen with Predefined Properties, 20

Comparison of Automated Image-Based Grain Sizing to Standard Pebble-Count Methods, 991

Granular media

Algorithm to Generate a Discrete Element Specimen with Predefined Properties, 20

Analytical Model for Fiber-Reinforced Granular Soils under High Confining Stresses, 1448

Characterization of Cementitiously Stabilized Granular Materials for Pavement Design Using Unconfined Compression and IDT Testings with Internal Displacement Measurements, 1396

Design Charts for Evaluating Impact Forces on Dissipative Granular Soil Cushions, 922

Determination of Fatigue Life of a Granular Base Material Lightly Stabilized with Slag Lime from Indirect Diametral Tensile Testing, 1867

Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822

Implementation of a Critical State Two-Surface Model to Evaluate the Response of Geosynthetic Reinforced Pavements, 33

Influence of Gravel on the Compression Characteristics of Decomposed Granite Soil, 926

Influence of Water on the Compression Behavior of Decomposed Granite Soil, 842

Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands, 517

Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands

Mechanistic Corrections for Determining the Resilient Modulus of Base Course Materials Based on Elastic Wave Measurements, 881

Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials, 518

Micromechanical Modeling for Inherent Anisotropy in Granular Materials, 539

Modeling Permanent Deformation of Unbound Granular Materials under Repeated Loads, 37

Modeling TOC Breakthrough in Granular Activated Carbon Adsorbers, 631

Percolation Threshold of Sand-Clay Binary Mixtures, 804

Prediction of Permanent Deformations in Pavements Using a High-Cycle Accumulation Model, 845

Time Effects Relate to Crushing in Sand, 893

Gravel

Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812

Case Study: Flood Mitigation of the Muda River, Malaysia, 969

Effect of Vegetation on Banks on Distributions of Velocity and Reynolds Stress under Accelerating Flow, 1127

Estimation of the Washout Depth of Fine Sediments from a Granular Bed, 1022

Evaluation of a Novel Approach to Determine the Critical Shields Stress, 1145

Hydraulic and Sedimentological Characterizations of a Reach on the Anaktuvuk River, Alaska, 1040

Increased Lateral Abutment Resistance from Gravel Backfills of Limited Width, 795

Influence of Gravel on the Compression Characteristics of Decomposed Granite Soil, 926

Laboratory Measurements on Turbulent Pressure Fluctuations in and above Gravel Beds, 1021

Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054

Gravity

Interpolating Surface Gravity Data for Assessing the Accuracy of a Ground Inertial Navigation System/Global Positioning System Gravimetric System, 1783

Gravity waves

Channel Bed Slope Effect on the Height of Gravity Waves Produced by a Sudden Downstream Discharge Stoppage, 976

Laboratory Study of Low-Frequency Waves Induced by Random Gravity Waves on Sloping Beaches, 2041

Great Lakes

Lakefront Renaissance, 2200

Real-Time Hydraulic and Hydrodynamic Model of the St. Clair River, Lake St. Clair, Detroit River System, 995

Greece

Bus-to-Depot Allocation: Models and Decision Support System, 1852

Groins, structures

Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004

Ground motion

Blast Limits for Transmission Structures. II: Structural Response and Blast Limit Development, 1501

Buried Pipeline Response to Braced Excavation Movements, 1518

Decomposition and Effects of Pulse Components in Near-Field Ground Motions, 1675

Effect of Wall Flexibility on Dynamic Response of Concrete Rectangular Liquid Storage Tanks under Horizontal and Vertical Ground Motions, 1652

Ground Movements around Corners of Excavations: Empirical Calculation Method, 911

Impact of Different Earthquake Types on the Statistics of Ductility Demand, 1684

Nonlinear Static Analysis of Structures with Rocking Columns, 1661

Seismic Fragility Formulations for Segmented Buried Pipeline Systems Including the Impact of Differential Ground Subsidence, 1579

Seismic Resistance Capacity of High-Rise Buildings Subjected to Long-Period Ground Motions: E-Defense Shaking Table Test, 1670

Groundwater

Aggradation of Irrigation Canal Network in Žitný Ostrov, Southern Slovakia, 1247

Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665

Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924

Evolution of the Pore-Pressure Field around a Moving Conical Penetrometer of Finite Size, 485

Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221

Image-Based Machine Learning for Reduction of User Fatigue in an Interactive Model Calibration System, 283

Lake Effect in Wellhead Protection, 2000

Land Subsidence Disaster Survey and Its Economic Loss Assessment in Tianjin, China, 2081

Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231

Optimization of Underground Water Pumping, 1246

River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289

Simple Method for Quick Estimation of Leaky-Aquifer Parameters, 1217

Simulation of Radial Collector Well in Shallow Alluvial Riverbed Aquifer Using Analytic Element Method, 1211

Transport Characteristics in a 3D Groundwater Circulation Flow Field by Experimental and Numerical Investigations, 2115

Groundwater depletion

Numerical Simulation of Viscoelastoplastic Land Subsidence due to Groundwater Overdrafting in Shanghai, China, 1079

Three-Dimensional Semianalytical Solutions of Groundwater Flow to a Well in Fractured Wedge-Shaped Aquifers, 1153

Groundwater flow

Application of a Mass Balance-Based Stochastic Transport Model, 2113

Boundary Condition of Groundwater Flow through Sloping Seepage Face, 1129

Standard Guideline for the Geostatistical Estimation and Block-Average of Homogeneous and Isotropic Saturated Hydraulic Conductivity, 2282

Three-Dimensional Semianalytical Solutions of Groundwater Flow to a Well in Fractured Wedge-Shaped Aquifers, 1153

Truncating Cross-Sectional Groundwater Models under Wetlands, 1110

Groundwater management

Analytical Study of Water Table Fluctuation in Unconfined Aquifers due to Varying Bed Slopes and Spatial Location of the Recharge Basin, 1147

Approach Using Active Groundwater Storage for Hydrologic Model Calibration in West-Central Florida, 1205

Classroom Activities to Illustrate Concepts of Darcy's Law and Hydraulic Conductivity, 1583

Diagnostic Curves for Identifying Leaky Aquifer Parameters with or without Aquitard Storage, 1204

Distribution of Stream Depletion, 959

Effects of Urbanization on Groundwater, 2239

Field Evaluation of Bauxite Residue Neutralization by Carbon Dioxide, Vegetation, and Organic Amendments, 726

Graphical Solutions for Hillslopes: Discharge, Head, and Velocity Diagrams, 1263

Groundwater Classification Using Multivariate Statistical Methods: Birimian Basin, Ghana, 765
Groundwater Level Prediction Using SOM-RBFN Multisite Model, 1117
Groundwater Modeling for the Analysis of Active Slow-Moving Landslides, 894
Locating Nested Monitoring Wells to Reduce Model Uncertainty for Management of a Multilayer Coastal Aquifer, 1132
Logic-Based Design of Groundwater Monitoring Network for Redundancy Reduction, 1967
Long-Term Capacity of Plant Mulch to Remediate Trichloroethylene in Groundwater, 727
Multiobjective Groundwater Remediation System Design Using Coupled Finite-Element Model and Nondominated Sorting Genetic Algorithm II, 1091
Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989
Optimal Spacing in an Array of Fully Penetrating Ditches for Subsurface Drainage, 1206
Watershed-Scale Impacts of Nitrogen from On-Site Wastewater Systems: Parameter Sensitivity and Model Calibration, 715

Groundwater pollution

Adsorption of RDX and its Nitroso Metabolites onto Activated Carbon, 2104
Analytical Solution for Two-Dimensional Solute Transport in Finite Aquifer with Time-Dependent Source Concentration, 590
Assessing of Natural Attenuation and Intrinsic Bioremediation Rates at a Petroleum-Hydrocarbon Spill Site: Laboratory and Field Studies, 615
Distribution of the Microbial Community Structure in Sulfur-Based Autotrophic Denitrification Columns, 666
Effectiveness of Source-Zone Remediation of DNAPL-Contaminated Subsurface Systems, 663
Health-Risk-Based Remedial Alternatives for Contaminated Aquifer Management, 2101
Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829
Logic-Based Design of Groundwater Monitoring Network for Redundancy Reduction, 1967
Model to Describe the Binodal Curve on a Type 1 Ternary Phase Diagram, 686
Performance of a PRB for the Remediation of Acidic Groundwater in Acid Sulfate Soil Terrain, 862
Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660
Treatment of TCE-Contaminated Groundwater Using Fenton-Like Oxidation Activated with Basic Oxygen Furnace Slag, 642

Groundwater quality

Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660

Groundwater recharge

Analytical Model of Surge Flow in Nonprismatic Permeable Channels and Its Application in Arid Regions, 972
Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682
Effects of Primary Substrate Concentration on NDMA Transport during Simulated Aquifer Recharge, 652
Estimation of Evapotranspiration from Bioretention Areas Using Weighing Lysimeters, 1108
Graphical Solutions for Hillslopes: Discharge, Head, and Velocity Diagrams, 1263
Integrated Water Resource Management for Kaoping River Basin, 2111
Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016
Modeling Water Table Mounding and Contaminant Transport beneath Storm-Water Infiltration Basins, 1152
River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289

Groundwater supply

Optimizing Capacity-Expansion Planning of Groundwater Supply System between Cost and Subsidence, 1118

Grouting

Compaction Grouting Consensus Guide, 2230
Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502
Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128
In-Plane Behavior of Partially Grouted Reinforced Concrete Masonry Shear Walls, 1715
Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116
Monitoring and Modeling Grout Efficiency of Lifting Structure in Soft Clay, 35
Optimization of Cement Grouts Containing Silica Fume and Viscosity Modifying Admixture, 1377
Selection of Durable Closure Pour Materials for Accelerated Bridge Construction, 160
Ultrafine Cement in Pressure Grouting, 2292

Guam

Infragravity Wave Motions and Runup over Shallow Fringing Reefs, 2056

Guidelines

Wind Loads, 2294

Guideways

Dynamic Simulation of the Maglev Vehicle/Guideway System, 120

Gulf of Mexico

Energy Infrastructure Damage Analysis for Hurricane Rita, 2088
Innovation in Ingleside, 2195
Multidisciplinary Assessment of Critical Facility Response to Natural Disasters, 2264
Social Vulnerability and Hurricane Impact Modeling, 2084

Guyed towers

Design of Dynamically Wind-Loaded Helical Piers for Small Wind Turbines, 1538

Gypsum

Evaluation and Remediation of an Abandoned Gypsum Mine, 835

Experimental Seismic Response of a Full-Scale Light-Frame Wood Building, 1631
Experimental Study on Full-Scale Light Frame Wood House under Lateral Load, 1687
Filling of a Flooded Gypsum Mine with a Flowable Soil-Cement Mix, 1411
Forensic Investigations to Evaluate Sulfate-Induced Heave Attack on a Tunnel Shotcrete Liner, 1446
Micromechanical Explanation of Elasticity and Strength of Gypsum: From Elongated Anisotropic Crystals to Isotropic Porous Polycrystals, 483

Half space

Forced Vertical Vibration of Rigid Circular Disc on a Transversely Isotropic Half-Space, 548
Stress-Prediction Model for Airport Pavements with Jointed Concrete Slabs, 1859
Vertical Vibrations of a Rigid Foundation Embedded in a Poroelastic Half Space, 497

Handicapped persons

Putting Cities Back on Their Feet, 1942

Harbor facilities

Innovation in Ingleside, 2195

Harbors

Estuarine and Coastal Modeling, 2241
Hydrological Effects of Bounding the Venice (Italy) Industrial Harbor by a Protection Cutoff Wall: Modeling Study, 1144
Incorporation of Air Emissions in Dredging Method Selection, 2046
Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913
Kernel-Based Machine Learning Models for Predicting Daily Truck Volume at Seaport Terminals, 1911
Passive Restraint System for Floating Docks with Large Water-Level Excursions, 2159
Ports 2010, 2270
Probabilistic Performance-Based Procedure to Evaluate Pile Foundations at Sites with Liquefaction-Induced Lateral Displacement, 819
Safe Operation and Maintenance of Dry Dock Facilities, 2275
Shaking Table Model Tests on Pile Groups behind Quay Walls Subjected to Lateral Spreading, 820

Hawaii

Assessing Rainfall Data Homogeneity and Estimating Missing Records in Mākaha Valley, O'ahu, Hawai'i, 1062
Ka Loko Dam Break, 1310

Hazardous materials

Application of Hilbert-Huang Transform Method for Analyzing Toxic Concentrations in the Niagara River, 1066
Bench-Scale Evaluation of Chemically Bonded Phosphate Ceramic Technology to Stabilize Mercury Waste Mixtures, 639
SCIA: GIS-Based Software for Assessing the Impacts from Chemical Industrial Accidents, 2106

Hazardous wastes

Disposal of Arsenic-Laden Adsorptive Media: Economic Analysis for California, 730
Importance of Mineralogy in the Geoenvironmental Characterization and Treatment of Chromite Ore Processing Residue, 823

Hazards

Case-Based Reasoning Approach to Construction Safety Hazard Identification: Adaptation and Utilization, 331
Collection and Analysis of Critical Infrastructure Interdependency Relationships, 311
Knowledge and Data Integration for Modeling of Problems of Risk due to Natural and Man-Made Hazards, 2120
Safety of Structures in Strong Winds and Earthquakes: Multihazard Considerations, 1640
Simplified Approximation Procedure for Performance-Based Evaluation of Liquefaction Potential, 787
Simulation-Based Assessment of Vehicle Safety Behavior under Hazardous Driving Conditions, 1822

Head loss

Integrated Emitter Local Loss Prediction Using Artificial Neural Networks, 1200
Slip-Lined Culvert Inlet End Treatment Hydraulics, 1202

Heat treatment

Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660

Heavy metals

Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668
Contaminant Leaching from Stabilized/Solidified Acid Tars, 764
Efficient Microwave Technology to Immobilize Heavy Metal Copper (Cu) Contaminated Soil by Microwave Energy, 2097
Metal Contamination Characteristics of *Lepidium sativum* in a Phosphate-, Saline-, and Nitrate-Contaminated Media, 751
New Insights into the Quality of Urban Storm Water in South Eastern Australia, 654
Removal of Heavy Metal Ions by Waste Biomass of *Saccharomyces Cerevisiae*, 619
Removal of Metal Ions from Storm-Water Runoff by Low-Cost Sorbents: Batch and Column Studies, 734
Removal of Selected Toxic Metals by a Modified Adsorbent, 2109
Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660
Sorption of Cr (VI) onto Olive Stone in a Packed Bed Column: Prediction of Kinetic Parameters and Breakthrough Curves, 766
Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699
Study on Pb and PAHs Emission Levels of Heavy Metals- and PAHs-Contaminated Soil during Thermal Treatment Process, 621

Height

Direct Formula to Compute Wave Height and Angle at Incipient Breaking, 2040
Height and Construction Costs of Residential High-Rise Buildings in Shanghai, 430

Heterogeneity

Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923
Green-Ampt One-Dimensional Infiltration from a Ponded Surface into a Heterogeneous Soil, 1207

Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829

Low Flow Scaling with Respect to Drainage Area and Precipitation in Northern Iran, 1077

Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231

Roughness Model Accounting for Heterogeneity Based on In-Service Pavement Performance Data, 1812

High occupancy vehicles

Influence of HOV Lane Access on HOV Lane Utilization, 1899

Travelers' Response to Value Pricing: Application of Departure Time Choices to TRANSIMS, 1875

High-strength concrete

Analytical Model for Circular Normal- and High-Strength Concrete Columns Confined with FRP, 233

Behavior and Modeling of Confined High-Strength Concrete, 201

Behavior of Steel Fiber-Reinforced High-Strength Concrete Columns under Uniaxial Compression, 1728

Differences between Calculated and Measured Long-Term Deflections in a Prestressed Concrete Girder Bridge, 1557

Empirical Stress-Strain Model for Unconfined High-Strength Concrete under Uniaxial Compression, 1476

Experimental Investigation on Square High-Strength Concrete Short Columns Confined with AFRP Sheets, 210

Experimental Study of Normal- and High-Strength Concrete Confined with Fiber-Reinforced Polymers, 232

HSC with Expanded Perlite Aggregate at Wet and Dry Curing Conditions, 1486

Modeling Strength of High-Performance Concrete Using an Improved Grammatical Evolution Combined with Macrogenetic Algorithm, 287

Residual Mechanical Properties of High-Strength Concretes after Exposure to Elevated Temperatures, 1346

Shear Characteristics and Design for High-Strength Self-Consolidating Concrete, 1705

Thermal and Mechanical Properties at High Temperature of a Very High-Strength Durable Concrete, 1402

Highway and road shoulders

Performance Problems and Stabilization Techniques for Granular Shoulders, 1511

Highway and road structures

Full-Scale Impact Test of Four Traffic Barriers on Top of an Instrumented MSE Wall, 815

Modeling Residual Displacements of Concrete Bridge Columns under Earthquake Loads Using Fiber Elements, 117

Highways and roads

Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185

Contractor Performance Evaluation for the Best Value of Superpave Projects, 374

Cost Savings Analysis of Performance-Based Contracts for Highway Maintenance Operations, 1189

Detection of Vehicles with Studded Tires Using Acoustic Emission Sensors Mounted to Highway Bridges, 1839

Determinants of Industry Acceptance for Highway Warranty Contracts: Alabama Case Study, 1172

Diffusion Wave Model for Simulating Storm-Water Runoff on Highway Pavement Surfaces at Superelevation Transition, 1020

Effects of Pavement Spatial Variability on Contractor's Management Strategies, 1187

Effects of Recycled Materials on Long-Term Performance of Cold In-Place Recycled Asphalt Roads, 1523

Estimation of Capacity of Two-Lane Two-Way Highways Using Simulation Model, 1795

Estimation of Highway Maintenance Marginal Cost under Multiple Maintenance Activities, 1881

Estimation of Remaining Service Life of Flexible Pavements from Surface Deflections, 1826

Evaluation of Risk Factors Leading to Cost Overrun in Delivery of Highway Construction Projects, 367

Evaluation of Stone Strong Gravity Wall System by Stone Strong Systems: Final Report, 2242

Evaluation of the Visibility of Workers' Safety Garments during Nighttime Highway-Maintenance Operations, 1850

Factors Affecting Driver Speed Choice along Two-Lane Rural Highway Transition Zones, 1869

Field Infiltration Characteristics of Natural Rainfall in Compacted Roadside Slopes, 797

Footprint Design Manual for Local Roads, 2244

Frequency of Change Orders in Highway Construction Using Alternate Count-Data Modeling Methods, 403

Gray Clustering-Based Pavement Performance Evaluation, 1792

Green Streets and Highways 2010, 2250

Highway Improvement Project Rankings due to Uncertain Model Inputs: Application of Traditional Transportation and Land Use Models, 1949

Highway Network Retrofit under Seismic Hazard, 1182

Horizontal Curve Accident Modification Factor with Consideration of Driveway Density on Rural Four-Lane Highways in Texas, 1877

How Lane Arrangements on Freeway Mainlines and Ramps Affect Safety of Freeways with Closely Spaced Entrance and Exit Ramps, 1854

Influence of Highway Project Characteristics on Contract Type Selection: Empirical Assessment, 1196

Integrated Framework for Quantifying and Predicting Weather-Related Highway Construction Delays, 429

Interactive Process of Microsimulation and Logistic Regression for Short-Term Work Zone Traffic Diversion, 1816

Investigation of Laboratory Procedure for Evaluating Chemical Dust Palliative Performance, 1472

Life-Cycle Cost Analysis of Highway Intersection Safety Hardware Improvements, 1803

Longitudinal Study of Innovative Contracting Practices in State Departments of Transportation, 1303

Method of Up-Slope Mitigation Priority for Alishan Mountain Road in Taiwan, 1533

Methodology to Analyze Sun Glare Impact on Highway under Prolonged Exposure, 1910

Methodology to Analyze Sun Glare Related Safety Problems at Highway Tunnel Exits, 1846

Microscopic Traffic Simulation Approach to the Capacity Impact Analysis of Weaving Sections for the Exclusive Bus Lanes on an Urban Expressway, 1885
Model for Quantifying the Impact of Change Orders on Project Cost for U.S. Roadwork Construction, 415
Multicriteria Decision-Making Approach for Highway Slope Hazard Management, 1167
On the Study of Polishing of Road Surface under Traffic Load, 1793
Performance of MBE/DBE/WBE Construction Firms in Transportation Projects, 390
Practical Solution Concepts for Planning and Designing Roadways, 1820
Proportion-Based Format System for Freeway and Expressway Guide Signs, 1818
Relationship between Access Management and Other Physical Roadway Characteristics and Safety, 1804
Road Roughness and Whole Body Vibration: Evaluation Tools and Comfort Limits, 1876
Roadway Reinvention, 2197
Sensor Network for Structural Health Monitoring of a Highway Bridge, 263
Shakedown Approaches to Rut Depth Prediction in Low-Volume Roads, 600
Simulation-Based Secondary Incident Filtering Method, 1868
Speed Prediction Models for Multilane Highways: Simultaneous Equations Approach, 1880
Structural Design of Interlocking Concrete Pavement for Municipal Streets and Roadways [ASCE/T&DI/ICPI 58-10], 2284
Traffic and Transportation Studies 2010, 2289
Transferability of Community-Based Collision Prediction Models for Use in Road Safety Planning Applications, 1882
Under Control, 2214
Vision-Based Roadway Geometry Computation, 1814
Washington State's I-405 Project: Women in Industry Leadership, 2073

Hinges

Analysis of Moment Redistribution in Fiber-Reinforced Polymer Plated RC Beams, 219

Historic sites

Assessment of Flooding Risk to Cultural Heritage in Historic Sites, 1539
Celebrating Hoover Dam: In Appreciation of a Civil Engineering Icon, 2215
Celebrating Hoover Dam: Mission of Boulder Dam Fulfilled, 2218
Celebrating Hoover Dam: Significance of Boulder Canyon Project, 2217
Celebrating Hoover Dam: The Majesty of Hoover Dam, 2216
Flood Damage to Historic Buildings and Structures, 1540
Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542
Performance of a Retrofitted Medieval Stone Bridge under a Severe Flood, 1545
Rehabilitation and Preservation of the St. Lourdes Church, Tiruchirappalli, 1524

History

Analysis of Dispute Review Boards Application in U.S. Construction Projects from 1975 to 2007, 1324
Automated Generation of Customized Field Data Collection Templates to Support Information Needs of Cost Estimators, 274
Building Robustness Research during World War II, 1549
C. Shaler Smith, 113
Cabin John Bridge: Role of Alfred L. Rives, C.E., 1514
Celebrating Hoover Dam: In Appreciation of a Civil Engineering Icon, 2215
Celebrating Hoover Dam: Mission of Boulder Dam Fulfilled, 2218
Celebrating Hoover Dam: Significance of Boulder Canyon Project, 2217
Celebrating Hoover Dam: The Majesty of Hoover Dam, 2216
Effect of Historic Land Cover Change on Runoff Curve Number Estimation in Iowa, 1124
Empire State Building Project: Archetype of "Mass Construction", 384
Evaluation of Flow Liquefaction and Liquefied Strength Using the Cone Penetration Test, 856
History of the Modern Suspension Bridge, 2255
Hoover Dam, 2256
Leading, Learning, and Living the Shackleton Way: Education and Practice, 2066
Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319
Seismic Damage Estimation for Buried Pipelines: Challenges after Three Decades of Progress, 1563
The Story of World Record Spans, 2171
Structural Analyses and Assessment of Historical Kamanlı Mosque in Izmir, Turkey, 1531

Holes

Numerical Study of the Effect of Verification Core Hole on the Point Bearing Capacity of Drilled Shafts, 900

Hollow sections

Evaluation of Direct Strength Method for CFS Compression Members without Stiffeners, 1694
Large-Scale Experimental Study of Precast Segmental Unbonded Posttensioned Concrete Bridge Columns for Seismic Regions, 1632
Plastic Behavior of Shear Tabs Welded to Flexible Wall Support, 1725
Upper Bound Plastic Interaction Relations for Elliptical Hollow Sections, 559

Honeycomb structures

Steel Hexagonal Honeycomb Core Equivalent Elastic Moduli for Bridge Deck Sandwich Panels, 45

Hong Kong

Chinese Values and Stressors of Construction Professionals in Hong Kong, 442
Construction Mediation Landscape in the Civil Justice System in Hong Kong, 1308
Contractors' Competition Strategies in Bidding: Hong Kong Study, 420
Critical Success Factors for Stakeholder Management: Construction Practitioners' Perspectives, 391
Empirical Study of the Risks and Difficulties in Implementing Guaranteed Maximum Price and Target Cost Contracts in Construction, 364
Engineering the Tower and Main Span Construction of Stonecutters Bridge, 108

Impacts of Stressors and Stress on the Injury Incidents of Construction Workers in Hong Kong, 423

Mastering a Mountain, 2223

Modeling Construction Occupational Demand: Case of Hong Kong, 413

Modeling the Heterogeneity in Contractors' Mark-Up Behavior, 386

Potential Obstacles to Successful Implementation of Public-Private Partnerships in Beijing and the Hong Kong Special Administrative Region, 1320

Worth the Wait, 2213

Housing

Affordable Housing and Social Mix: Comparative Approach, 1296

Boost, Control, or Both of Korean Housing Market: 831 Countermeasures, 383

Building Capacity through Collaborative Local Action: Case of Matra REGIMA within Zeytinburnu Regeneration Scheme, 1936

CBR Revision Model for Improving Cost Prediction Accuracy in Multifamily Housing Projects, 1338

Controversial Strata Legislation: Catalyst for Housing Regeneration in Singapore, 1299

Eurohypothec: Drafting a Common Mortgage for Europe, 1298

Housing Law Is Dead. Long Live European Housing Law?, 1295

International Instruments on Housing Rights, 1294

Maximizing Temporary Housing Safety after Natural Disasters, 1177

Maximizing the Sustainability of Integrated Housing Recovery Efforts, 393

Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316

When the Cold Wind Blows: Legal Strategies against Ghettoization in Denmark, 1297

Human factors

Breaking into the Men's Room: Five Traits of Women Engineers with a Boardroom Seat, 2074

Critical Review of Collaborative Working in Construction Projects: Business Environment and Human Behaviors, 1335

Development of Soil and Water Assessment Tool Model on Human Water Use and Application in the Area of High Human Activities, Tianjin, China, 1201

Differences in Off-Road Glances: Effects on Young Drivers' Performance, 1831

Discharge Capacity of Labyrinth Side Weir Located on a Straight Channel, 1203

Human-Environment Interactions Based on Biophilia Values in an Urban Context: Case Study, 1935

Image-Based Machine Learning for Reduction of User Fatigue in an Interactive Model Calibration System, 283

Immigration and Construction: Analysis of the Impact of Immigration on Construction Project Costs, 1334

Impacts of Stressors and Stress on the Injury Incidents of Construction Workers in Hong Kong, 423

Modeling Spatially Unrestricted Pedestrian Traffic on Footbridges, 1735

Personal Construct-Based Factors Affecting Interpersonal Trust in a Project Design Team, 337

Sleep Deprivation and Its Consequences in Construction Workers, 422

What If You Have Been Retrenched? Look toward the Bright Side: Capitalize on Your Psychological Capital, 2071

Work Stress, Support, and Mental Health in Construction, 379

Work-Family Conflict in Construction: Case for a Finer-Grained Analysis, 433

Humidity

New Performance-Based Approach to Ensure Quality Curing during Construction, 1418

Hurricanes

Development of a Large-Scale Traffic Simulation Model for Hurricane Evacuation—Methodology and Lessons Learned, 2091

Energy Infrastructure Damage Analysis for Hurricane Rita, 2088

Energy Supply System Performance for Hurricane Katrina, 457

Engineering Perspectives on Reducing Hurricane Damage to Housing in CARICOM Caribbean Islands, 2092

Estimating the Social and Economic Consequences of Natural Hazards: Fiscal Impact Example, 2083

Field Damage Survey of New Orleans Homes in the Aftermath of Hurricane Katrina, 2078

Hurricane Response of Nearshore Borrow Pits from Airborne Bathymetric Lidar, 2033

Maximizing the Sustainability of Integrated Housing Recovery Efforts, 393

Methodology for Wind-Driven Rainwater Intrusion Fragilities for Light-Frame Wood Roof Systems, 1676

Multidisciplinary Assessment of Critical Facility Response to Natural Disasters, 2264

Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045

Social Vulnerability and Hurricane Impact Modeling, 2084

"Three Little Pigs" Project: Hurricane Risk Mitigation by Integrated Wind Tunnel and Full-Scale Laboratory Tests, 2093

Ultimate Wind Load Design Gust Wind Speeds in the United States for Use in ASCE-7, 1668

Wind Storm and Storm Surge Mitigation, 2295

Hybrid methods

Assessment of Thermal Damage in Hybrid Fiber-Reinforced Concrete, 1437

Bending, Buckling, and Vibration of Micro/Nanobeams by Hybrid Nonlocal Beam Model, 516

Counterfactual Analysis of Sustainable Project Delivery Processes, 373

Dynamic Model of an Astronaut Equipped with a Manned Maneuvering Unit in Virtual Reality, 55

Emerging Hybrid Practices in Construction Design Work: Role of Mixed Media, 361

Equilibrium-Based Finite-Element Formulation for the Geometrically Exact Analysis of Planar Framed Structures, 604

Global Optimization of Pavement Structural Parameters during Back-Calculation Using Hybrid Shuffled Complex Evolution Algorithm, 302

Hybrid Control Charts for Active Control and Monitoring of Concrete Strength, 1348
Large-Scale Nonlinear Conjunctive Use Optimization Problem: Decomposition Algorithm, 1964
Recommendations for Seismic Design of Hybrid Coupled Wall Systems, 2273
Tracking Error-Based Servohydraulic Actuator Adaptive Compensation for Real-Time Hybrid Simulation, 1651
Two-Dimensional Depth-Averaged Flow Modeling with an Unstructured Hybrid Mesh, 942

Hydration

Chromium (III) Immobilization and Its Influence on C_3S Hydration, 2124
New Performance-Based Approach to Ensure Quality Curing during Construction, 1418
Proposed Behavioral Model for Deicer Scaling Resistance of Slag Cement Concrete, 1380

Hydraulic conductivity

Aggradation of Irrigation Canal Network in Žitný Ostrov, Southern Slovakia, 1247
Analytical Solution for Biot Flow–Induced Damping in Saturated Soil during Shear Wave Excitations, 919
Centrifuge Permeameter for Unsaturated Soils. I: Theoretical Basis and Experimental Developments, 878
Centrifuge Permeameter for Unsaturated Soils. II: Measurement of the Hydraulic Characteristics of an Unsaturated Clay, 879
Classroom Activities to Illustrate Concepts of Darcy's Law and Hydraulic Conductivity, 1583
Consolidation of a Geosynthetic Clay Liner under Isotropic States of Stress, 798
Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665
Evolution of the Pore-Pressure Field around a Moving Conical Penetrometer of Finite Size, 485
Feasibility of Using Coal Fly Ash for Mine Waste Containment, 690
Fines Accumulation and Distribution in a Storm-Water Rain Garden Nine Years Postconstruction, 1292
Green-Ampt One-Dimensional Infiltration from a Ponded Surface into a Heterogeneous Soil, 1207
Hydraulic Property Estimation Using Piezocone Results, 818
Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829
Microporosity Structure of Coarse Granular Soils, 912
Soil Moisture Profile Development from Surface Observations by Principle of Maximum Entropy, 1089
Standard Guideline for the Geostatistical Estimation and Block-Average of Homogeneous and Isotropic Saturated Hydraulic Conductivity, 2282
Stochastic Simulation of Non-Gaussian 3D Conductivity Fields in a Fractured Medium with Multiple Statistical Populations: Case Study, 1112

Hydraulic design

Energy Losses in Cross Junctions, 946
Large-Scale Nonlinear Conjunctive Use Optimization Problem: Decomposition Algorithm, 1964
Manifold Flow in Pressure-Distribution Systems, 1576

Hydraulic engineering

Case Study: Flood Mitigation of the Muda River, Malaysia, 969
Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136

Hydraulic gradients

Boundary Condition of Groundwater Flow through Sloping Seepage Face, 1129

Hydraulic jump

Design of a Scroll Vortex Inlet for Supercritical Approach Flow, 1030
Energy Dissipation and Turbulent Production in Weak Hydraulic Jumps, 952

Hydraulic models

Analysis and Synthesis of Transmission Loss Hydrographs, 1271
Application of a Mass Balance-Based Stochastic Transport Model, 2113
Channel Bed Slope Effect on the Height of Gravity Waves Produced by a Sudden Downstream Discharge Stoppage, 976
Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries, 1067
Comparison of the Monod and Droop Methods for Dynamic Water Quality Simulations, 723
Diffusion Wave Model for Simulating Storm-Water Runoff on Highway Pavement Surfaces at Superelevation Transition, 1020
Effect of Time Scale on the Performance of Different Sediment Transport Formulas in a Semiarid Region, 947
Estuarine and Coastal Modeling, 2241
Flood Simulation Using a Well-Balanced Shallow Flow Model, 1011
Fuzzy Genetic Approach for Modeling Reference Evapotranspiration, 1219
High-Resolution Method for Modeling Hydraulic Regime Changes at Canal Gate Structures, 1287
Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053
Hydraulic Deterioration Models for Storm-Water Drainage Pipes: Ordered Probit versus Probabilistic Neural Network, 275
Hydraulic Model for Sedimentation in Storm-Water Detention Basins, 672
Impact of Bridge Rail Geometry on Floodplain Analysis, 1156
Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072
Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida, 1976
Modeling the Effect of Flow Structure Selection on Residence Time in an Artificial Canal System: Case Study, 2037
Modeling Unsteady Open-Channel Flow for Controller Design, 1243
Modeling Urban Storm-Water Quality Treatment: Model Development and Application to a Surface Sand Filter, 616
Phosphorus Budget and Remediation Plan for Big Platte Lake, Michigan, 2017
Pressure-Dependent Leak Detection Model and Its Application to a District Water System, 1970
Quality Modeling of Water Distribution Systems Using Sensitivity Equations, 944

Real-Time Hydraulic and Hydrodynamic Model of the St. Clair River, Lake St. Clair, Detroit River System, 995

Real-Time Implementation of Model Predictive Control on Maricopa-Stanfield Irrigation and Drainage District's WM Canal, 1281

Sensitivity Analysis of Nonequilibrium Adaptation Parameters for Modeling Mining-Pit Migration, 1025

Sensitivity of Field Data Estimates in One-Dimensional Hydraulic Modeling of Channels, 983

Soil Moisture Profile Development from Surface Observations by Principle of Maximum Entropy, 1089

Supervision and Water Depth Automatic Control of an Irrigation Canal, 1199

Hydraulic networks

Assessing Pressure Changes in an On-Demand Water Distribution System on Drip Irrigation Performance—Case Study in Italy, 1229

Experimental Analysis of Hydraulic Solver Convergence with Genetic Algorithms, 977

Irrigation Distribution Networks' Vulnerability to Climate Change, 1253

Hydraulic pressure

Assessing Pressure Changes in an On-Demand Water Distribution System on Drip Irrigation Performance—Case Study in Italy, 1229

Hydrodynamic Forces on Spillway Torque-Tube Gates, 1013

Hydraulic properties

Estimation of Unsaturated Hydraulic Parameters from Infiltration and Internal Drainage Experiments, 1283

Hydraulic Property Estimation Using Piezocone Results, 818

Hydraulic roughness

Estimating an Impedance-to-Flow Parameter for Flood Peak Prediction in Semiarid Watersheds, 1074

Formulation of the Entropy Parameter Based on Hydraulic and Geometric Characteristics of River Cross Sections, 1141

Riparian Vegetation Mapping for Hydraulic Roughness Estimation Using Very High Resolution Remote Sensing Data Fusion, 1032

Self-Aeration and Friction over Rock Chutes in Uniform Flow Conditions, 1044

Simplified versus Detailed Two-Dimensional Approaches to Transient Flow Modeling in Urban Areas, 970

Hydraulic structures

Application of Riprap and Collar to Prevent Scouring around Rectangular Bridge Piers, 962

Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002

Coherent Structure Dynamics in Turbulent Flows Past In-Stream Structures: Some Insights Gained via Numerical Simulation, 1046

Design of a Scroll Vortex Inlet for Supercritical Approach Flow, 1030

Discharge Formulas for Subsurface Drainage of Retention Pond, 1223

Flow over Gabion Weirs, 1265

High-Resolution Method for Modeling Hydraulic Regime Changes at Canal Gate Structures, 1287

Hydrodynamic Forces on Spillway Torque-Tube Gates, 1013

Influence of Tailwater Depth and Pile Position on Scour Downstream of Block Ramps, 1212

Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition, 956

Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition

Modeling the Effect of Flow Structure Selection on Residence Time in an Artificial Canal System: Case Study, 2037

Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710

Numerical Simulations of Efficiency of Curb-Opening Inlets, 948

Reynolds Number Effects on the Near-Exit Region of Turbulent Jets, 1006

Turbulent Flow near Vertical Angled Fish Screen, 1042

Hydraulic transients

Frequency-Domain Modeling of Transients in Pipe Networks with Compound Nodes Using a Laplace-Domain Admittance Matrix, 1018

Quantifying Linearization Error When Modeling Fluid Pipeline Transients Using the Frequency Response Method, 1029

Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251

Wall Shear Stress in Transient Turbulent Pipe Flow by Local Velocity Measurement, 1016

Hydraulics

Bridge Pier Scour under Flood Waves, 1031

Hydraulic Geometry Relations for Stable Channel Design, 1142

Iterative Formulas and Estimation Formulas for Computing Normal Depth of Horseshoe Cross-Section Tunnel, 1286

Nonintrusive Method for Detecting Particle Movement Characteristics near Threshold Flow Conditions, 1284

Numerical Modeling for Hydraulic Resonance in Hydropower Systems Using Impulse Response, 1039

Numerical Modeling of River Flow for Ecohydraulic Applications: Some Experiences with Velocity Characterization in Field and Simulated Data, 1050

Slip-Lined Culvert Inlet End Treatment Hydraulics, 1202

Subcritical Contraction for Improved Open-Channel Flow Measurement Accuracy with an Upward-Looking ADVM, 1269

Turbulence Characteristics in Flows Subjected to Boundary Injection and Suction, 544

Hydro power

Data Consolidation from Hydroelectric Plants, 456

Impacts and Uncertainty of Climate Change on Water Resource Management of the Peribonka River System (Canada), 1997

Influence of Mechanical Draft Tube Fish Barrier on the Hydraulic Thrust of Small Francis Turbines, 1038

Numerical Modeling for Hydraulic Resonance in Hydropower Systems Using Impulse Response, 1039

Hydrocarbons

Assessing of Natural Attenuation and Intrinsic Bioremediation Rates at a Petroleum-Hydrocarbon Spill Site: Laboratory and Field Studies, 615

Clean up of Petroleum-Hydrocarbon Contaminated Soils Using Enhanced Bioremediation System: Laboratory Feasibility Study, 681

Contaminant Leaching from Stabilized/Solidified Acid Tars, 764

Contribution of Traffic-Generated Nonexhaust PAHs, Elemental Carbon, and Organic Carbon Emission to Air and Urban Runoff Pollution, 774

Study on Pb and PAHs Emission Levels of Heavy Metals- and PAHs-Contaminated Soil during Thermal Treatment Process, 621

Hydrodynamic pressure

Practical Formulas for Frequency Domain Analysis of Earthquake-Induced Dam-Reservoir Interaction, 470

Hydrodynamics

Assessment of a River Reach for Environmental Fluid Dynamics Studies, 1034

Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051

Case Study: Effect of Submerged Aquatic Plants on Turbulence Structure in a Lowland River, 988

Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047

Hydrodynamic Forces Generated on a Spherical Sediment Particle during Entrainment, 1019

Hydrodynamic Forces on Spillway Torque-Tube Gates, 1013

Hydrodynamic Performance of Single- and Double-Wave Screens, 2034

Hydrodynamics of Secondary Settling Tanks and Increasing Their Performance Using Baffles, 612

Large Eddy Simulation of Flow and Tracer Transport in Multichamber Ozone Contactors, 611

Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072

Model of Nearshore Waves and Wave-Induced Currents around a Detached Breakwater, 2044

Modeling the Effect of Flow Structure Selection on Residence Time in an Artificial Canal System: Case Study, 2037

Nonlinear Time-Domain Simulation of a Land-Based Oscillating Water Column, 2054

Real-Time Hydraulic and Hydrodynamic Model of the St. Clair River, Lake St. Clair, Detroit River System, 995

Riparian Vegetation Mapping for Hydraulic Roughness Estimation Using Very High Resolution Remote Sensing Data Fusion, 1032

Seismic Rotational Stability of Waterfront Retaining Wall Using Pseudodynamic Method, 16

Series Solution of Wire Coating Analysis Involving MHD Johnson-Segalman Fluid, 47

Time-Domain Hydrodynamic Forces on Rigid Dams with Reservoir Bottom Absorption of Energy, 585

Transient Hydrodynamic Dispersion in Rough Open Channels: Theoretical Analysis of Bed-Form Effects, 957

Hydrogen

Diverting Electron Fluxes to Hydrogen in Mixed Anaerobic Communities Fed with Glucose and Unsaturated C18 Long Chain Fatty Acids, 677

Hydrogen peroxide

Effect of Cocontaminants on the Remediation of PCB-Impacted Soils by Hydrogen Peroxide, 2127

Evaluation of UV LEDs Performance in Photochemical Oxidation of Phenol in the Presence of H_2O_2, 640

Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614

Luminol-Based Enhanced Chemiluminescence Assay for Quantification of Peroxidase and Hydrogen Peroxide in Aqueous Solutions: Effect of Reagent pH and Ionic Strength, 738

Treatment of TCE-Contaminated Groundwater Using Fenton-Like Oxidation Activated with Basic Oxygen Furnace Slag, 642

Hydrogen sulfides

Bacterial Kinetics of Sulfur Oxidizing Bacteria and Their Biodeterioration Rates of Concrete Sewer Pipe Samples, 695

Modeling the Oxidation of Sulfide in Pulp and Paper Wastewaters, 741

Tire-Derived Steel for Hydrogen Sulfide Removal in Landfill Cover, 2118

Hydrogeology

Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665

River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289

Hydrographs

Analysis and Synthesis of Transmission Loss Hydrographs, 1271

Derivation of Flood Hydrographs for Ungauged Upstream Subwatersheds Using a Main Outlet Hydrograph, 1160

Incorporating Surface Storage and Slope to Estimate Clark Unit Hydrographs for Ungauged Indiana Watersheds, 1148

Performance Investigation of Nakagami-m Distribution to Derive Flood Hydrograph by Genetic Algorithm Optimization Approach, 1121

Simplified Method for the Characterization of the Hydrograph following a Sudden Partial Dam Break, 1014

Hydrologic data

Assessment of Flooding Risk to Cultural Heritage in Historic Sites, 1539

Estimating Reference Evapotranspiration with Minimum Data in Florida, 1254

Quality Control of Soil Water Data in Applied Climate Information System—Case Study in Nebraska, 1076

Hydrologic models

Application of a Distributed Hydrologic Model to the November 17, 2004, Flood of Bull Creek Watershed, Austin, Texas, 1120

Approach Using Active Groundwater Storage for Hydrologic Model Calibration in West-Central Florida, 1205

Basin-Scale Water Resources Assessment in Oklahoma under Synthetic Climate Change Scenarios Using a Fully Distributed Hydrologic Model, 1068

Case Study: Flood Mitigation of the Muda River, Malaysia, 969

Case Study of Distributed Hydrologic Model for Soil and Nutrient Loss Estimation in Small Watershed, 2102

Correspondence between the Campbell and van Genuchten Soil-Water-Retention Models, 1262
Design of Integrated Bioinfiltration-Detention Urban Retrofits with Design Storm and Continuous Simulation Methods, 1104
Development of Soil and Water Assessment Tool Model on Human Water Use and Application in the Area of High Human Activities, Tianjin, China, 1201
Discharge Capacity of Labyrinth Side Weir Located on a Straight Channel, 1203
Estimating an Impedance-to-Flow Parameter for Flood Peak Prediction in Semiarid Watersheds, 1074
Evaluation of the Advection Scheme in the HSPF Model, 1075
Explaining Internal Behavior in a Fuzzy If-Then Rule-Based Flood-Forecasting Model, 1057
Hydrologic and Water Quality Integration Tool: HydroWAMIT, 11
Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088
Improving HSPF Modeling Accuracy from FTABLES: Case Study for the Illinois River Basin, 1119
Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138
Joint Water Quantity-Quality Management in a Biofuel Production Area—Integrated Economic-Hydrologic Modeling Analysis, 2009
Locating Nested Monitoring Wells to Reduce Model Uncertainty for Management of a Multilayer Coastal Aquifer, 1132
Modeling Controlled Water Systems, 1244
Modeling Evapotranspiration of Two Land Covers Using Integrated Hydrologic Model, 1256
Modeling Techniques of Best Management Practices: Rain Barrels and Rain Gardens Using EPA SWMM-5, 1099
Modeling the Time Variation of Reservoir Trap Efficiency, 1155
Modification of the Lake Flow Algorithm of the Distributed Hydrological Model HYDROTEL When Modeling Lakes with Multiple Outlets, 1151
Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114
Riparian Vegetation Mapping for Hydraulic Roughness Estimation Using Very High Resolution Remote Sensing Data Fusion, 1032
River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289
Simulation-Optimization Framework to Support Sustainable Watershed Development by Mimicking the Predevelopment Flow Regime, 1996
Using a Distributed Hydrologic Model to Evaluate the Location of Urban Development and Flood Control Storage, 2020
Validation of Two Wave and Nearshore Current Models, 2032
Valuation of Flood Reductions in the Yellow River Basin under Land Use Change, 1969

Hydrologic properties

Evaluation of Methods for Representing Urban Terrain in Storm-Water Modeling, 1055

Hydrology

Artificial Intelligence Techniques as Detection Tests for the Identification of Shifts in Hydrometric Data, 298
Case Study on the Accuracy and Cost/Effectiveness in Simulating Reference Evapotranspiration in West-Central Florida, 1125
Experimental Investigation of a Vortex-Flow Restrictor: Rain-Blocker Performance Tests, 998
Frequency Analysis Incorporating a Decision Support System for Hydroclimatic Variables, 1143
Generalized Extreme Value versus Halphen System: Exploratory Study, 1065
Impacts and Uncertainty of Climate Change on Water Resource Management of the Peribonka River System (Canada), 1997
Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096
Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072
Modeling and Sizing Bioretention Using Flow Duration Control, 1097
Performance of North American Bioreactor Landfills. I: Leachate Hydrology and Waste Settlement, 706
Standard Guideline for the Geostatistical Estimation and Block-Average of Homogeneous and Isotropic Saturated Hydraulic Conductivity, 2282

Hydrostatic pressure

Experiments on the Buckling Behavior of Ring-Stiffened Pipelines under Hydrostatic Pressure, 505

Hydrostatics

Method of Superimposition for Suction Force on Trash Rack, 1285
Nonhydrostatic Modeling of Nonlinear Deep-Water Wave Groups, 474
Pinning Force during Closure Process at Blocked Pipe Entrance, 1215

Hysteresis

Cyclic Behavior of Diagrid Nodes with H-Section Braces, 1717
Delay Correlation of Mechanical Hysteresis and Damping, 1613
Modeling Residual Displacements of Concrete Bridge Columns under Earthquake Loads Using Fiber Elements, 117
Performance Test of Energy Dissipation Bearing and Its Application in Seismic Control of a Long-Span Bridge, 153
Shear Strength Equations for Unsaturated Soil under Drying and Wetting, 832

I beams

Unified Flexural Resistance Equations for Stability Design of Steel I-Section Members: Overview, 8

Ice

Concrete Slab Installed with Carbon Fiber Heating Wire for Bridge Deck Deicing, 1841
Eave Ice Dams, 77
Gauging Rivers during All Seasons Using the Q2D Velocity Index Method, 963

Idaho

Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054

Identification
Assessment of Existing Structures Based on Identification, 1614
Concrete Column Recognition in Images and Videos, 305
Dynamic Identification of a Concrete Bridge with Orthotropic Plate-Type Deck, 1666
Efficient Model Correction Method with Modal Measurement, 468
Feature Selection Using Stochastic Search: An Application to System Identification, 262
Genetic-Algorithm-Based Strategies for Dynamic Identification of Nonlinear Systems with Noise-Corrupted Response, 278
Load Vectors for Damage Location in Systems Identified from Operational Loads, 462
Machine Vision-Based Concrete Surface Quality Assessment, 335
Modified Cross-Correlation Method for the Blind Identification of Structures, 545
Multimodel Structural Performance Monitoring, 1736
Structural Reliability Estimation with Vibration-Based Identified Parameters, 469

Illinois
Building Community Disaster Preparedness with Volunteers: Community Emergency Response Teams in Illinois, 2090
Improving HSPF Modeling Accuracy from FTABLES: Case Study for the Illinois River Basin, 1119
Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717

Imaging techniques
Application of Results of Nondestructive Testing Methods in the Investigation of Microstructure of Refractory Concretes, 1439
Benefits and Barriers of Construction Project Monitoring Using High-Resolution Automated Cameras, 377
Box-and-Ellipse-Based ANFIS for Bridge Coating Assessment, 297
Comparison of Automated Image-Based Grain Sizing to Standard Pebble-Count Methods, 991
Comprehensive Evaluation of AIMS Texture, Angularity, and Dimension Measurements, 1381
Computer Vision-Based Video Interpretation Model for Automated Productivity Analysis of Construction Operations, 284
Concrete Column Recognition in Images and Videos, 305
Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130
High-Performance Green Building Design Process Modeling and Integrated Use of Visualization Tools, 80
Image-Based Machine Learning for Reduction of User Fatigue in an Interactive Model Calibration System, 283
Impact of Bead Density on Paint Pavement Marking Retroreflectivity, 1871
Investigation of the Curing Mechanism of Foamed Asphalt Mixes Based on Micromechanics Principles, 1343
Machine Vision-Based Concrete Surface Quality Assessment, 335
Modeling of Crack Depths in Digital Images of Concrete Pavements Using Optical Reflection Properties, 1840
Multiscale Curvature Analysis of Asphaltic Aggregate Particles, 308
New Multidimensional Visualization Technique for Limit-State Surfaces in Nonlinear Finite-Element Reliability Analysis, 597
Object Recognition in Construction-Site Images Using 3D CAD-Based Filtering, 267
p-Wave Reflection Imaging of Submerged Soil Models Using Ultrasound, 906
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176
Terrestrial Laser Scanning-Based Structural Damage Assessment, 285

Impact
Effect of Secondary Impacts on SPT Rod Energy and Sampler Penetration, 824
Unreinforced Concrete Masonry Walls Strengthened with CFRP Sheets and Strips under Pendulum Impact, 252

Impact forces
Dynamic Crack Propagations in Prestressed Concrete Sleepers in Railway Track Systems Subjected to Severe Impact Loads, 1682

Impact loads
Equivalent Barge and Flotilla Impact Forces on Bridge Piers, 144
Some Comments on the Protection of Lunar Habitats against Damage from Meteoroid Impacts, 48

Impact tests
Full-Scale Impact Test of Four Traffic Barriers on Top of an Instrumented MSE Wall, 815

Implementation
Exchange Model and Exchange Object Concepts for Implementation of National BIM Standards, 264
Understanding and Managing Three-Dimensional/Four-Dimensional Model Implementations at the Project Team Level, 389

Impulsive loads
Air-Blast Effects on Structural Shapes of Finite Width, 1621

In situ tests
Deep Foundations and Geotechnical In Situ Testing (GSP 205), 2233
Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829
Penetration Type Field Velocity Probe for Soft Soils, 792

Incineration
Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

India
Addressing Sustainability in Benchmarking Framework for Indian Urban Water Utilities, 1171
Assessment of Policies toward an Environmentally Friendly Urban Transport System: Case Study of Delhi, India, 1926
Evaluation of VMS-Based Traffic Information Using Multiclass Dynamic Traffic Assignment Model: Experience in Kolkata, 1928

Farmers' Adaptation and Regional Land-Use Changes in Irrigation Systems under Fluctuating Water Supply, South India, 1267

Infrastructure Development Strategies for Inclusive Growth: India's Eleventh Plan, 2068

Investigations on Pastes and Mortars of Ordinary Portland Cement Admixed with Wollastonite and Microsilica, 1374

Modeling Generalized Cost of Travel and Its Application for Improvement of Taxies in Kolkata, 1921

Modeling the Time Variation of Reservoir Trap Efficiency, 1155

Multiobjective Transit Passenger Information System Design Using GIS, 1920

Observation on Particulate Matter over a Period of 3 Years at Kaikhali (22.022°N and 88.614°E) inside a Special Mangrove Ecosystem: Sundarbans, 622

PPP Experiences in Indian Cities: Barriers, Enablers, and the Way Forward, 356

Rehabilitation and Preservation of the St. Lourdes Church, Tiruchirappalli, 1524

Willingness to Shift to Walking or Bicycling to Access Suburban Rail: Case Study of Mumbai, India, 1917

Indiana

Cost Savings Analysis of Performance-Based Contracts for Highway Maintenance Operations, 1189

Frequency of Change Orders in Highway Construction Using Alternate Count-Data Modeling Methods, 403

Incorporating Surface Storage and Slope to Estimate Clark Unit Hydrographs for Ungauged Indiana Watersheds, 1148

Indonesia

Gender and Age Factors in Tsunami Casualties, 2080

Industrial facilities

Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235

High Rolling Steel, 2167

Management of Redeveloped Industrial Areas with Mixed Use in The Netherlands, 1300

Industrial wastes

Benthal Solids Properties Influencing ASB Design and Operating Practices, 633

Development of a Novel Internal Electrolysis System by Iron Connected with Carbon: Treatment of Nitroaromatic Compounds and Case of Engineering Application, 719

Experimental Validation of the Static Granular Bed Reactor for Industrial Waste Anaerobic Treatment, 737

Industrial Plant for Olive Mill Wastewater from Two-Phase Treatment by Chemical Oxidation, 757

Reuse of Fruit Waste as Biopolymeric Flocculant and Optimizing Turbidity Reduction: Comparison Study with Industrial Flocculant, 752

Sorption of Statin Pharmaceuticals to Wastewater-Treatment Biosolids, Terrestrial Soils, and Freshwater Sediment, 638

Use of Ozone-Photocatalytic Oxidation (O_3/UV/TiO_2) and Biological Remediation for Treatment of Produced Water from Petroleum Refineries, 613

Industrial water

Water Use Intensities and the Composition of Production in Canada, 1965

Inelasticity

Decoupling Criteria for Inelastic Irregular Primary/Secondary Structural Systems Subject to Seismic Excitation, 582

Dimensional Response Analysis of Multistory Regular Steel MRF Subjected to Pulselike Earthquake Ground Motions, 1698

Estimation of Influence Tensors for Eigenstressed Multiphase Elastic Media with Nonaligned Inclusion Phases of Arbitrary Ellipsoidal Shape, 562

Experimental Investigation of the Axial Capacity of Inelastically Pretwisted Steel Bars, 560

Hysteresis Model of Thin Infill Plate for Cyclic Nonlinear Analysis of Steel Plate Shear Walls, 1746

Inelastic Plate Buckling, 571

Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740

Moment-Rotation Response of Slender Steel I-Girders, 1756

Nonlinear Static Analysis of Structures with Rocking Columns, 1661

Rotation Requirements for Moment Redistribution in Steel Bridge I-Girders, 121

Stresses in External and Internal Unbonded Tendons: Unified Methodology and Design Equations, 1712

Infiltration

Analytical Model of Surge Flow in Nonprismatic Permeable Channels and Its Application in Arid Regions, 972

Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812

Design of Integrated Bioinfiltration-Detention Urban Retrofits with Design Storm and Continuous Simulation Methods, 1104

Effect of Rejuvenation Methods on the Infiltration Rates of Pervious Concrete Pavements, 1098

Effective Curve Number and Hydrologic Design of Pervious Concrete Storm-Water Systems, 1102

Field Infiltration Characteristics of Natural Rainfall in Compacted Roadside Slopes, 797

Fines Accumulation and Distribution in a Storm-Water Rain Garden Nine Years Postconstruction, 1292

Frequency Methodology for Evaluating Urban and Highway Storm-Water Quality Control Infiltration BMPs, 1983

Green-Ampt One-Dimensional Infiltration from a Ponded Surface into a Heterogeneous Soil, 1207

Integrated Water Resource Management for Kaoping River Basin, 2111

Modeling of Rainfall-Induced Shallow Landslides of the Flow-Type, 782

Modeling Water Table Mounding and Contaminant Transport beneath Storm-Water Infiltration Basins, 1152

Modified Horton's Equation to Model Advance Trajectory in Furrow Irrigation Systems, 1227

Physically Based Green Roof Model, 1101

Potential for Clay Clogging of Pervious Concrete under Extreme Conditions, 1063

Sensitivity Analysis for an Infiltration-Runoff Model with Parameter Uncertainty, 1122

Theory-Based SCS-CN Method and Its Applications, 1159

Urban Storm-Water Quality Management: Centralized versus Source Control, 1986

Inflatable structures
Effect of Fabric Webs on the Static Response of Spindle-Shaped Tensairity Columns, 1649

Inflow
Energy Dissipation and Turbulent Production in Weak Hydraulic Jumps, 952

Information management
Action Research as a Proactive Research Method for Construction Engineering and Management, 323
Activity Awareness as an Enabler for Communication and Network Building in Construction Design Teams, 301
Applying Concept Similarity to the Evaluation of Common Understanding in Multidisciplinary Learning, 292
Automated Generation of Customized Field Data Collection Templates to Support Information Needs of Cost Estimators, 274
Case-Based Reasoning Approach to Construction Safety Hazard Identification: Adaptation and Utilization, 331
Concept Relation Extraction from Construction Documents Using Natural Language Processing, 344
Cultivating Research and Information Skills in Civil Engineering Undergraduate Students, 1584
Domain Ontology for Processes in Infrastructure and Construction, 387
Dynamic Knowledge-Based Process Integration Portal for Collaborative Construction, 346
Effectiveness of ICT for Construction Information Exchange among Multidisciplinary Project Teams, 295
Evaluation of VMS-Based Traffic Information Using Multiclass Dynamic Traffic Assignment Model: Experience in Kolkata, 1928
Leadership Flexibility Space, 1333
Life-Cycle Management of Construction Projects Based on Virtual Prototyping Technology, 1321
Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289
Object Recognition in Construction-Site Images Using 3D CAD-Based Filtering, 267
Obstacles and Disaster Risk Reduction: Survey of Memphis Organizations, 2089
Prediction System for Change Management in Construction Project, 380
Web-Based Construction Project Specification System, 281

Information systems
Asset Management for Urban Wastewater Pipeline Networks, 1174
Concept Relation Extraction from Construction Documents Using Natural Language Processing, 344
Developing an ARIS-House-Based Method from Existing Information Systems to Project-Based Enterprise Resource Planning for General Contractor, 334
Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289
Multiobjective Transit Passenger Information System Design Using GIS, 1920
Organizational Divisions in BIM-Enabled Commercial Construction, 360
Stated Preference Approach for Valuation of Travel Time Displayed as Traffic Information on a VMS Board, 1941

Information technology (IT)
Building Information Modeling in Architecture, Engineering, and Construction: Emerging Research Directions and Trends, 1595
Concrete Column Recognition in Images and Videos, 305
Emerging Hybrid Practices in Construction Design Work: Role of Mixed Media, 361
Exchange Model and Exchange Object Concepts for Implementation of National BIM Standards, 264
Exploring the Potential of SME Alliances in the Construction Sector, 370
Innovation Diffusion Modeling in the Construction Industry, 347
Interaction of Lean and Building Information Modeling in Construction, 411
Machine Vision-Based Concrete Surface Quality Assessment, 335
Object Model Framework for Interface Modeling and IT-Oriented Interface Management, 333
Organizational Divisions in BIM-Enabled Commercial Construction, 360
Teaching Building Information Modeling as an Integral Part of Freshman Year Civil Engineering Education, 1585
Web-Based Construction Project Specification System, 281

Infrastructure
Adaptive Climate Response Cost Models for Infrastructure, 1181
Climate Links and Variability of Extreme Sea-Level Events at Key West, Pensacola, and Mayport, Florida, 2061
Collection and Analysis of Critical Infrastructure Interdependency Relationships, 311
Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634
Critical Success Factors for PPPs in Infrastructure Developments: Chinese Perspective, 363
Design Criteria of Urban Drainage Infrastructures under Climate Change, 1979
Deterioration Forecasting Model with Multistage Weibull Hazard Functions, 1192
Determinants of Efficient Risk Allocation in Privately Financed Public Infrastructure Projects in Australia, 328
Domain Ontology for Processes in Infrastructure and Construction, 387
Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095
Economics and Finance for Engineers and Planners, 2238
Enabling Development of the Transportation Public-Private Partnership Market in the United States, 354
Energy Infrastructure Damage Analysis for Hurricane Rita, 2088
Hierarchical Fuzzy Expert System for Risk of Failure of Water Mains, 1567
Hierarchical Structuring of PPP Risks Using Interpretative Structural Modeling, 329
Highway Network Retrofit under Seismic Hazard, 1182

ICCTP 2010, 2257
Infrastructure Development Strategies for Inclusive Growth: India's Eleventh Plan, 2068
Modeling Blockage Failures in Sewer Systems to Support Maintenance Decision Making, 1559
Monitoring Design for Source Identification in Water Distribution Systems, 2024
Network-Level Infrastructure Management Using Approximate Dynamic Programming, 1173
Neurofuzzy Decision Support System for Efficient Risk Allocation in Public-Private Partnership Infrastructure Projects, 310
Observed and Modeled Performances of Prototype Green Roof Test Plots Subjected to Simulated Low- and High-Intensity Precipitations in a Laboratory Experiment, 1100
Optimal Maintenance and Repair Policies under Nonlinear Preferences, 1163
Optimizing Resource Utilization during the Recovery of Civil Infrastructure Systems, 1339
Optimum Location of Motorway Interchanges: Users' Perspective, 1892
Peer-to-Peer-Based Publish/Subscribe Architecture for Advanced Infrastructure Systems, 268
Pipelines 2010, 2268
Planning for Commercial Vehicle Weight Limit Change: Application and Computer Software, 2129
Potential Obstacles to Successful Implementation of Public-Private Partnerships in Beijing and the Hong Kong Special Administrative Region, 1320
PPP Experiences in Indian Cities: Barriers, Enablers, and the Way Forward, 356
Price Competitive Alliance Projects: Identification of Success Factors for Public Clients, 409
Putting Cities Back on Their Feet, 1942
Revisiting the Strengths and Limitations of Regulatory Contracts in Infrastructure Industries, 1197
Rework in Civil Infrastructure Projects: Determination of Cost Predictors, 342
Risk Allocation in Public-Private Partnership Infrastructure Projects: Comparative Study, 1198
River Training and Ecological Enhancement Potential Using In-Stream Structures, 1045
Scour and Erosion (GSP 210), 2276
Selecting Infrastructure Delivery Modalities: No Time for Ideology or Semantics, 355
Special Report: The Infrastructure Roundtables: Address Life-Cycle Costs and Ongoing Maintenance, 2177
Special Report: The Infrastructure Roundtables: Concluding Thoughts—Chairman's Summary, 2179
Special Report: The Infrastructure Roundtables: Concluding Thoughts— Increase Federal Leadership In Infrastructure, 2180
Special Report: The Infrastructure Roundtables: Concluding Thoughts— Promote Sustainability And Resilience, 2181
Special Report: The Infrastructure Roundtables: Concluding Thoughts—Develop Federal, Regional, and State Infrastructure Plans, 2182
Special Report: The Infrastructure Roundtables: Concluding Thoughts—Address Life-Cycle Costs and Ongoing Maintenance, 2183
Special Report: The Infrastructure Roundtables: Concluding Thoughts— Increase and Improve Investment From All Stakeholders, 2184
Special Report: The Infrastructure Roundtables: Concluding Thoughts—Questions on the Five Key Solutions Round, 2185
Special Report: The Infrastructure Roundtables: Concluding Thoughts—How Do We Spread the Message About the Need to Improve the Nation's Infrastructure? How Can Civil Engineers Best Engage the Public and Policy Makers?, 2186
Special Report: The Infrastructure Roundtables: Concluding Thoughts—It's Time to Get Serious about Investing in Our Infrastructure, 2187
Special Report: The Infrastructure Roundtables: Concluding Thoughts—What Can You Do about the Infrastructure Crisis? The, 2188
Special Report: The Infrastructure Roundtables: Develop Federal, Regional, and State Infrastructure Plans, 2176
Special Report: The Infrastructure Roundtables: Increase Federal Leadership in Infrastructure, 2174
Special Report: The Infrastructure Roundtables: Increase Infrastructure Investment at All Levels of Government, 2178
Special Report: The Infrastructure Roundtables: Promote Sustainability and Resilience, 2175
Special Report: The Infrastructure Roundtables: Seeking Solutions to an American Crisis, 2173
Sustainability Guidelines for the Structural Engineer, 2285
Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190
Who Needs to Know What? Institutional Knowledge and Global Projects, 369

Injuries

Gender and Age Factors in Tsunami Casualties, 2080
Impacts of Stressors and Stress on the Injury Incidents of Construction Workers in Hong Kong, 423

Inlets, waterways

Numerical Simulations of Efficiency of Curb-Opening Inlets, 948

Innovation

Application of Innovative Critical Chain Method for Project Planning and Control under Resource Constraints and Uncertainty, 419
The Burj Khalifa Triumphs: Reaching toward The Heavens, 2170
Construction Research Congress 2010, 2231
Does a Technology Incubator Work in the Regional Economy? Evidence from South Korea, 1947
Emerging Hybrid Practices in Construction Design Work: Role of Mixed Media, 361
Innovation Diffusion Modeling in the Construction Industry, 347
Promoting Sustainability through Transportation Infrastructure? Innovation and Inertia in the Kansas City Metropolitan Area, 1950
Tailoring Competitive Advantages Derived from Innovation to the Needs of Construction Firms, 371

Inorganic compounds

Competitive Sorption of Pesticides onto Treated Wood Charcoal and the Effect of Organic and Inorganic Parameters on Adsorption Capacity, 732

Inspection

Deficiency Analysis of Coastal Buildings toward Storm Damage Reduction, 1508

Determination and Optimization of the Maintenance Frequencies in the Overhead Contact Line System, 1893

Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130

Identifying Critical Sources of Bridge Deterioration in Cold Regions through the Constructed Bridges in North Dakota, 146

Inspection and Condition Assessment Using Ground Penetrating Radar, 793

Inspection, Condition Assessment, and Management Decisions for Commercial Roof Systems, 86

Integrated Conveyance Condition Assessment Techniques Support Asset Management and Capacity Driven Projects, 1573

Ka Loko Dam Break, 1310

Long-Term Wireless Structural Health Monitoring of the Ferriby Road Bridge, 109

Parametric Estimation for RC Flexural Members Based on Distributed Long-Gauge Fiber Optic Sensors, 1620

Structural Deformation Characteristics of Installed HDPE Circular Pipelines, 1821

Installation

Analysis of Soil Disturbance Associated with Mandrel-Driven Prefabricated Vertical Drains Using an Elliptical Cavity Expansion Theory, 17

Artificial Neural Network Model for Cost Estimation: City of Edmonton's Water and Sewer Installation Services, 388

Nonlinear Finite-Element-Based Investigation of the Effect of Bedding Thickness on Buried Concrete Pipe, 1873

Trenchless Renewal of Culverts and Storm Sewers, 2291

Instrumentation

Critical Assessment of Interstory Drift Measurements, 1760

Design and Performance of a 46-m-High MSE Wall, 851

Interplay between Field Measurements and Soil Behavior for Capturing Supported Excavation Response, 781

Soil Moisture Measurements: Comparison of Instrumentation Performances, 1208

Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854

Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103

Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916

Insulation

Below-Ground Performance of Rigid Polystyrene Foam Insulation: Review of Effective Thermal Resistivity Values Used in ASCE Standard 32-01—Design and Construction of Frost-Protected Shallow Foundations, 170

Structural Characterization of Composite Structural Insulated Panels for Exterior Wall Applications, 223

Insurance

Construction Risks: Single versus Portfolio Insurance, 1317

Improving Flood Insurance and Flood-Risk Management: Insights from St. Louis, Missouri, 2094

Intake structures

Case Study: Movable Bed Model Scaling for Bed Load Sediment Exclusion at Intake Structure on Rio Grande, 968

Design of a Scroll Vortex Inlet for Supercritical Approach Flow, 1030

A Solid Foundation, 2209

Integral equations

Forced Vertical Vibration of Rigid Circular Disc on a Transversely Isotropic Half-Space, 548

Integrated systems

Dynamic Performance Simulation of Long-Span Bridge under Combined Loads of Stochastic Traffic and Wind, 115

Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500

Integrated Schedule and Cost Model for Repetitive Construction Process, 1325

Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016

Multiobjective Transit Passenger Information System Design Using GIS, 1920

Organizational Divisions in BIM-Enabled Commercial Construction, 360

Peer-to-Peer-Based Publish/Subscribe Architecture for Advanced Infrastructure Systems, 268

Intelligent structures

Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500

Long-Term Wireless Structural Health Monitoring of the Ferriby Road Bridge, 109

Intelligent transportation systems

ICCTP 2010, 2257

Older Drivers' Perception and Acceptance of In-Vehicle Devices for Traffic Safety and Traffic Efficiency, 1838

Peer-to-Peer-Based Publish/Subscribe Architecture for Advanced Infrastructure Systems, 268

Short-Term Prediction of Urban Traffic Variability: Stochastic Volatility Modeling Approach, 1853

Interfaces

Characteristics of Monami Wave in Submerged Vegetated Flow, 1073

Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500

Experimental Investigation of the Influence of Moisture on the Bond Behavior of FRP to Concrete Interfaces, 258

Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844

Object Model Framework for Interface Modeling and IT-Oriented Interface Management, 333

Simple Model for the Cyclic Behavior of Smooth Sand-Steel Interfaces, 874

Use of Mixed-Mode Fracture Interfaces for the Modeling of Large-Scale FRP-Strengthened Beams, 259

Internal pressure

Performance of a Nongasketed Flange Joint under Combined Internal Pressure and Bending Loading, 607

Variation of Internal Pressure with Varying Sizes of Dominant Openings and Volumes, 1737

Internal waves
Horizontal Dispersion in Gyres-Internal Wave Flow Field in a Rotating Circular Lake, 1115

International development
Global Economic Forces' Effect upon Urban Planning: Greater Amman Case Study, 1930
Selecting Infrastructure Delivery Modalities: No Time for Ideology or Semantics, 355
Who Needs to Know What? Institutional Knowledge and Global Projects, 369

International factors
Emergence and Role of Cultural Boundary Spanners in Global Engineering Project Networks, 1329
Empirical Assessment of Internationalization Strategies for Small and Medium Construction Companies, 444
Evolution and Development of Multiairport Systems: Worldwide Perspective, 1898
Factors Affecting Construction Project Outcomes: Case Study of Vietnam, 1596
Globalization: Conundrums and Paradoxes for Civil Engineering, 2063
Great Achievements & Grand Challenges, 2164
Inter- and Intraorganizational Trust in International Construction Joint Ventures, 349
Mobilizing Institutional Knowledge for International Projects, 357
Performance of International Joint Ventures in Construction, 1336
Simplest Way to Reach the Most Complicated Goal: "In the Urban Planning, Questions Are Ours and Answers Are the Natives's", 1934

Internet
Development of EPA OTM 10 for Landfill Applications, 700
Dynamic Knowledge-Based Process Integration Portal for Collaborative Construction, 346
Effective Monitoring of the Concrete Pouring Operation in an RFID-Based Environment, 272
Effectiveness of ICT for Construction Information Exchange among Multidisciplinary Project Teams, 295
Legal Issues of Integrated Network for Construction and Real Estate Sector, 1313
Pavement Interactive: Pavement Knowledge Transfer with Web 2.0, 1914
Performance of MBE/DBE/WBE Construction Firms in Transportation Projects, 390
Sensor Network for Structural Health Monitoring of a Highway Bridge, 263
Web-Based Advanced Traveler Information System for Developing Countries, 1878
Web-Based Construction Project Specification System, 281

Intersections
Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923
Comparative Analysis of Compact Multilane Roundabouts and Turbo-Roundabouts, 1823
Comparative Analysis of Unconditional and Conditional Priority for Use at Isolated Signalized Intersections, 1906
Delay Function for Signalized Intersections in Traffic Assignment Models, 1924
Life-Cycle Cost Analysis of Highway Intersection Safety Hardware Improvements, 1803
Modeling and Simulation of Traffic Movements at Semiactuated Signalized Intersections, 1847
Optimum Location of Motorway Interchanges: Users' Perspective, 1892
Right Turns on Green and Pedestrian Level of Service: Statistical Assessment, 1
Roadway Lighting Shows Safety Benefits at Rural Intersections, 1891
Signal Treatments to Reduce the Likelihood of Heavy Vehicle Crashes at Intersections: Microsimulation Modeling Approach, 1856
Stochastic Dilemma Hazard Model at High-Speed Signalized Intersections, 1835
Weaving Section Flow Model at the Weaving Area of Malaysian Conventional Roundabout, 1872

Inventories
AC Pipe in North America: Inventory, Breakage, and Working Environments, 1581

Investments
Asset Management for Urban Wastewater Pipeline Networks, 1174
Employing the Net Present Value-Consistent IRR Methods for PFI Contracts, 395
Intrametropolitan Determinants of Foreign Investment Firms in Istanbul, 1943
Mechanisms for Transportation Infrastructure Investment in Developing Countries, 1927
Methodological Framework for Evaluation of Financial Viability of Public-Private Partnerships: Investment Risk Approach, 1188
Practical Application of SWOT Analysis in the Management of a Construction Project, 2070
Rating Sustainability: Transportation Investments in Urban Corridors as a Case Study, 1937
Selecting Infrastructure Delivery Modalities: No Time for Ideology or Semantics, 355
Special Report: The Infrastructure Roundtables: Concluding Thoughts— Increase and Improve Investment From All Stakeholders, 2184
Special Report: The Infrastructure Roundtables: Concluding Thoughts—It's Time to Get Serious about Investing in Our Infrastructure, 2187
Special Report: The Infrastructure Roundtables: Increase Infrastructure Investment at All Levels of Government, 2178
Study of Real Options with Exogenous Competitive Entry to Analyze Dispute Resolution Ladder Investments in Architecture, Engineering, and Construction Projects, 352

Ion exchange
Advances in Modeling Completely Mixed Flow Reactors for Ion Exchange, 736

Iowa
Effect of Historic Land Cover Change on Runoff Curve Number Estimation in Iowa, 1124
Long-Term Field Performance of Cold In-Place Recycled Roads in Iowa, 1522

Iran
Comparison of Different Irrigation Methods Based on the Parametric Evaluation Approach in Abbas Plain: Iran, 1213
Effect of Adaptive Cluster Sampling Design on Accuracy of Sediment Rating Curve Estimation, 1071

Frequency Distribution of Extreme Hydrologic Drought of Southeastern Semiarid Region, Iran, 1083

Long-Term Operation of Irrigation Dams Considering Variable Demands: Case Study of Zayandeh-rud Reservoir, Iran, 1234

Low Flow Scaling with Respect to Drainage Area and Precipitation in Northern Iran, 1077

Optimization of Watershed Control Strategies for Reservoir Eutrophication Management, 1291

Regional Bivariate Frequency Analysis of Meteorological Droughts, 1154

Regional Estimation of Reference Evapotranspiration in Arid and Semiarid Regions, 1279

Ireland

Dramatic Inclination, 2202

Iron compounds

Development of a Novel Internal Electrolysis System by Iron Connected with Carbon: Treatment of Nitroaromatic Compounds and Case of Engineering Application, 719

Evaluating the Mobility of Arsenic in Synthetic Iron-Containing Solids Using a Modified Sequential Extraction Method, 635

Mathematical Model for the Sequestering of Chemical Contaminants by Magnetic Particles, 750

Modeling Arsenite Adsorption on Rusting Metallic Iron, 657

Modeling the Removal of Arsenic by Iron Oxide Coated Sand, 636

Iron, material

Exploring the Relationship between Soil Properties and Deterioration of Metallic Pipes Using Predictive Data Mining Methods, 288

Irrigation

Aggradation of Irrigation Canal Network in Žitný Ostrov, Southern Slovakia, 1247

Block Ramp Design for Efficient Energy Dissipation, 446

Celebrating Hoover Dam: Mission of Boulder Dam Fulfilled, 2218

Comparison of Different Irrigation Methods Based on the Parametric Evaluation Approach in Abbas Plain: Iran, 1213

Design of a Single-Pool Downstream Controller Using Quantitative Feedback Control Theory, 1275

Development of Soil and Water Assessment Tool Model on Human Water Use and Application in the Area of High Human Activities, Tianjin, China, 1201

Discharge Capacity of Labyrinth Side Weir Located on a Straight Channel, 1203

Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268

Evaluation of Microirrigation Uniformity on Laterals Considering Field Slopes, 1248

Generalization of ET_o ANN Models through Data Supplanting, 1218

Irrigation Distribution Networks' Vulnerability to Climate Change, 1253

Irrigation Scheduling with Genetic Algorithms, 1277

Knowledge-Based Model for Supplementary Irrigation Assessment in Agricultural Watersheds, 1242

Lattice Boltzmann Model for the Simulation of Flows in Open Channels with Application to Flows in a Submerged Sluice Gate, 1288

Long-Term Operation of Irrigation Dams Considering Variable Demands: Case Study of Zayandeh-rud Reservoir, Iran, 1234

Modeling Conjunctive Use Operations and Farm Decisions with Two-Stage Stochastic Quadratic Programming, 1998

OCCASION: New Planning Tool for Optimal Climate Change Adaption Strategies in Irrigation, 1290

Overtopping Probability Constrained Optimal Design of Composite Channels Using Swarm Intelligence Technique, 1259

Performance Evaluation and Uncertainty Measurement in Irrigation Scheduling Soil Water-Balance Approach, 1280

Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222

Performance of Penman-Monteith FAO56 in a Semiarid Highland Environment, 1282

Real-Time Implementation of Model Predictive Control on Maricopa-Stanfield Irrigation and Drainage District's WM Canal, 1281

Relative Comparison of the Local Recalibration of the Temperature-Based Evapotranspiration Equation for the Korea Peninsula, 1266

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978

Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220

Simple Method for the Design of Microirrigation Paired Laterals on Sloped Fields, 1230

Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232

Irrigation districts

Application of Software for Automatic Canal Management (SacMan) to the WM Lateral Canal, 1249

Canal Seepage Reduction by Soil Compaction, 1252

Downstream-Water-Level Control Test Results on the WM Lateral Canal, 1250

Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251

Irrigation systems

External Iterative Coupling Strategy for Surface-Subsurface Flow Calculations in Surface Irrigation, 1276

Farmers' Adaptation and Regional Land-Use Changes in Irrigation Systems under Fluctuating Water Supply, South India, 1267

Impact of Irrigation Management Transfer on Land and Water Productivity and Water Supply in the Gediz Basin, Turkey, 1233

Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222

River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289

Supervision and Water Depth Automatic Control of an Irrigation Canal, 1199

Isolation
Behavior of Bidirectional Spring Unit in Isolated Floor Systems, 1700
Characterization of a Roller Seismic Isolation Bearing with Supplemental Energy Dissipation for Highway Bridges, 1658
Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657
Seismic Sophistication, 2191
Tensile Stiffness and Deformation Model of Rubber Isolators in Tension and Tension-Shear States, 501
Theoretical Studies of the XY-FP Seismic Isolation Bearing for Bridges, 154

Isotropy
Estimating Subgrade Reaction Modulus for Transversely Isotropic Rock Medium, 880
Forced Vertical Vibration of Rigid Circular Disc on a Transversely Isotropic Half-Space, 548
High-Pressure Isotropic Compression Tests on Fiber-Reinforced Cemented Sand, 861

Italy
Below-Average Bidding Method, 408
Detection of Terrain Morphologic Features Using GPS, TLS, and Land Surveys: "Tana della Volpe" Blind Valley Case Study, 1782
Effect of Time Scale on the Performance of Different Sediment Transport Formulas in a Semiarid Region, 947
Evaluation and Remediation of an Abandoned Gypsum Mine, 835
Formulation of the Entropy Parameter Based on Hydraulic and Geometric Characteristics of River Cross Sections, 1141
Geomechanical Characterization of the Volcaniclastic Material Involved in the 2002 Landslides at Stromboli, 811
Hydrological Effects of Bounding the Venice (Italy) Industrial Harbor by a Protection Cutoff Wall: Modeling Study, 1144
Learning from Construction Failures due to the 2009 L'Aquila, Italy, Earthquake, 1550
Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224
Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Jacking
Stack Pipe Model for Pipe Jacking Method, 382

Japan
Kashiwazaki, Japan, Earthquake of July 16, 2007, 2261
Numerical Examination of a Method for Reducing the Temperature of Municipal Solid Waste Landfill Liners, 703
One-Dimensional Study on Propagation of Tsunami Wave in River Channels, 950
Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114

Jets, fluid
Deposition from Particle-Laden, Plane, Turbulent, Buoyant Jets, 5
Experimental Study of Sand and Slurry Jets in Water, 1017
Field Measurements of Mean Velocity Characteristics of a Large-Diameter Swirling Jet, 1007
Penetration Length of Confined Counter Flowing Free Jets, 961
Reynolds Number Effects on the Near-Exit Region of Turbulent Jets, 1006

Jetties
Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525

Joint ventures
Inter- and Intraorganizational Trust in International Construction Joint Ventures, 349
Mechanisms for Transportation Infrastructure Investment in Developing Countries, 1927
Performance of International Joint Ventures in Construction, 1336

Joints
Behavior of Bridge Asphalt Plug Joints under Thermal and Traffic Loads, 118
Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512
Buckling of a Weakened Infinite Beam on an Elastic Foundation, 513
CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183
Comparison between Models of Rock Discontinuity Strength and Deformation, 858
Compression Performance of Steel Pipelines with Welded Slip Joints, 1561
Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578
Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550
Engineered Bamboo I-Joists, 1765
Evaluation of Longitudinal Joint Construction Techniques for Asphalt Pavements in Tennessee, 1468
Fully Coupled 10-Degree-of-Freedom Beam Theory for Piecewise Straight Thin-Walled Beams with General Quadrilateral Cross Sections, 1762
Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Concept Development, 125
Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Fatigue Evaluation, 143
Load Transfer Characteristics of Aggregate Interlocking in Concrete Pavement, 1810
Local Delamination Buckling of Laminated Composite Beams Using Novel Joint Deformation Models, 514
Method for Estimating the Deformability of Heavily Jointed Rock Masses, 896
Modeling of Crack Depths in Digital Images of Concrete Pavements Using Optical Reflection Properties, 1840
Seismic Behavior of Reinforced Concrete Exterior Wide Beam-Column Joints, 1608
Seismic Rehabilitation of Corner RC Beam-Column Joints Using CFRP Composites, 244
Seismic Response of FRP-Upgraded Exterior RC Beam-Column Joints, 195
State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181
Stress-Prediction Model for Airport Pavements with Jointed Concrete Slabs, 1859

Joists
Vibration Performance of Lightweight Cold-Formed Steel Floors, 1671

Jordan
Global Economic Forces' Effect upon Urban Planning: Greater Amman Case Study, 1930

Kalman filters
Deformation Detection in the GPS Real-Time Series by the Multiple Kalman Filters Model, 1785
Extended Kalman Filtering to Improve the Accuracy of a Subsurface Contaminant Transport Model, 664
Flood Forecasting in Regulated Basins Using the Ensemble Extended Kalman Filter with the Storage Function Method, 1158
New Layer-Moduli Back-Calculation Method Based on the Constrained Extended Kalman Filter, 1790
Probabilistic Forecasting of Project Duration Using Kalman Filter and the Earned Value Method, 398
Structural Reliability Estimation with Vibration-Based Identified Parameters, 469

Kansas
River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

Karst
Regional Frequency Analysis of Low Flow Based on L Moments: Case Study in Karst Area, Southwest China, 1093

Kentucky
Practical Solution Concepts for Planning and Designing Roadways, 1820

Kinematic wave theory
Accuracy of Kinematic Wave and Diffusion Wave Approximations for Flood Routing. I: Steady Analysis, 7

Kinematics
Application of Exponential-Based Methods in Integrating the Constitutive Equations with Multicomponent Nonlinear Kinematic Hardening, 606
Extension of the Touratier Kinematic Model to Large Strains, Displacements, and Rotations, 587
Face Stability Analysis of Circular Tunnels Driven by a Pressurized Shield, 794
Influence of Rocking Motion on Vibratory Roller-Based Measurement of Soil Stiffness, 546
Seismic Behavior of Batter Piles: Elastic Response, 891
Simple Yield Surface Expressions Appropriate for Soil Plasticity, 29
Statistical Properties of Strain and Rotation Tensors in Geodetic Network, 1778

Kinetics
Adsorption of As(V) from Water Using Nanomagnetite, 656
Aerobic Methane Oxidation Coupled to Denitrification: Kinetics and Effect of Oxygen Supply, 632
Application of Natural Clayey Soil as Adsorbent for the Removal of Copper from Wastewater, 769
Assessment of Flocculation Kinetics of Cohesive Sediments from the Seine and Gironde Estuaries, France, through Laboratory and Field Studies, 2057
Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668
Development of a Kinetic Model for the Biosorption of Cationic Dyes by Dead Macrofungi, 667
Energy Dissipation and Turbulent Production in Weak Hydraulic Jumps, 952
Kinetics of Arsenite Oxidation by Chemoautotrophic *Thiomonas arsenivorans* Strain b6 in a Continuous Stirred Tank Reactor, 735
Kinetics of SO_2 Absorption with Fly Ash Slurry with Concomitant Production of a Useful Wastewater Coagulant, 645
New Approach: Waste Materials as Sorbents for Arsenic Removal from Water, 753
Removal of Heavy Metal Ions by Waste Biomass of *Saccharomyces Cerevisiae*, 619
Removal of Selected Toxic Metals by a Modified Adsorbent, 2109
Simultaneous Desulfurization and Denitrification by Microwave Catalytic over FeCoCu/Zeolite 5A Catalyst, 768
Sorption of Cr (VI) onto Olive Stone in a Packed Bed Column: Prediction of Kinetic Parameters and Breakthrough Curves, 766

Knowledge-based systems
Applying Concept Similarity to the Evaluation of Common Understanding in Multidisciplinary Learning, 292
Case-Based Reasoning Approach to Construction Safety Hazard Identification: Adaptation and Utilization, 331
Domain Ontology for Processes in Infrastructure and Construction, 387
Knowledge and Data Integration for Modeling of Problems of Risk due to Natural and Man-Made Hazards, 2120
Knowledge-Based Landslide Susceptibility Zonation System, 291
Knowledge-Based Model for Supplementary Irrigation Assessment in Agricultural Watersheds, 1242
Mobilizing Institutional Knowledge for International Projects, 357
Pavement Interactive: Pavement Knowledge Transfer with Web 2.0, 1914
Project Organizations as Social Networks, 359
Spatial Decision Support System for Urban Planning: Case Study of Harbin City in China, 1933
SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractors for Bonding, 435
Who Needs to Know What? Institutional Knowledge and Global Projects, 369

Korea, South
Assessing the Environmental Impacts of a Lean Supply System: Case Study of High-Rise Condominium Construction in Korea, 92
Boost, Control, or Both of Korean Housing Market: 831 Countermeasures, 383
Climate Change Impact Assessment Using K-Nearest Neighbor Weather Generator: Case Study of the Nakdong River Basin in Korea, 1133
Data Preprocessing–Based Parametric Cost Model for Building Projects: Case Studies of Korean Construction Projects, 399
Does a Technology Incubator Work in the Regional Economy? Evidence from South Korea, 1947

Evaluating Watershed Management within a River Basin Context Using an Integrated Indicator System, 1985

Flood Forecasting in Regulated Basins Using the Ensemble Extended Kalman Filter with the Storage Function Method, 1158

Partnering Process Model for Public-Sector Fast-Track Design-Build Projects in Korea, 1319

Relative Comparison of the Local Recalibration of the Temperature-Based Evapotranspiration Equation for the Korea Peninsula, 1266

Kuwait

Behavior of Step Tapered Bored Piles in Sand under Static Lateral Loading, 839

Construction Safety in Kuwait, 1502

Labor

Critical Concerns of Production Control System on Projects with Labor Constraints: Lessons from a Residential Case Study, 1332

Critical Investigation into the Applicability of the Learning Curve Theory to Rebar Fixing Labor Productivity, 441

Forecasting Construction Manpower Demand by Gray Model, 443

Immigration and Construction: Analysis of the Impact of Immigration on Construction Project Costs, 1334

Modeling Construction Occupational Demand: Case of Hong Kong, 413

Population and Initial Validation of a Formal Model for Construction Safety Risk Management, 412

Quantification of Losses of Labor Efficiencies: Innovations in and Improvements to the Measured Mile, 1302

Work-Family Conflict in Construction: Case for a Finer-Grained Analysis, 433

Laboratories

Learning Applications in the Architectural Engineering Educational Setting, 90

Laboratory tests

Anomalous Contraction Scour? Vertical-Contraction Case, 955

Assessing of Natural Attenuation and Intrinsic Bioremediation Rates at a Petroleum-Hydrocarbon Spill Site: Laboratory and Field Studies, 615

Assessment of Flocculation Kinetics of Cohesive Sediments from the Seine and Gironde Estuaries, France, through Laboratory and Field Studies, 2057

Class A Prediction of the Behavior of Soft Estuarine Soil Foundation Stabilized by Short Vertical Drains beneath a Rail Track, 841

Clean up of Petroleum-Hydrocarbon Contaminated Soils Using Enhanced Bioremediation System: Laboratory Feasibility Study, 681

Compression Performance of Steel Pipelines with Welded Slip Joints, 1561

Damage Identification in a Truss Tower by Regularized Model Updating, 1637

Development of Mechanical Anchor for CFRP Tendons Using Integrated Sleeve, 216

Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691

Evaluation of Electric Arc Furnace Slag as a Potential Phosphate-Removal Substrate, 649

Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036

Geomechanical Characterization of the Volcaniclastic Material Involved in the 2002 Landslides at Stromboli, 811

Geotechnical Characterization Field Measurement, and Laboratory Testing of Municipal Solid Waste, 2248

Granular Activated Carbon Adsorption of 2-Methylisoborneol (MIB): Pilot- and Laboratory-Scale Evaluations, 718

Influence of Osmotic Suction on the Soil-Water Characteristic Curves of Compacted Expansive Clay, 938

Laboratory Evaluation of Moisture Susceptibility of Hot-Mix Asphalt Containing Cementitious Fillers, 1416

Laboratory Experiments on the Failure of Coarse Homogeneous Sediment Natural Dams on a Sloping Bed, 1033

Laboratory Measurements on Turbulent Pressure Fluctuations in and above Gravel Beds, 1021

Laboratory Study of Low-Frequency Waves Induced by Random Gravity Waves on Sloping Beaches, 2041

Laboratory Study of Unidirectional Focusing Waves in Intermediate Depth Water, 467

Laboratory Study on Ultraviolet Radiation Aging of Bitumen, 1427

Laboratory Test and Numerical Simulation of Time-Dependent Thermomechanical Behavior of the Three-Gorges Dam, 1352

Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties, 12

Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004

Shear Strength of Municipal Solid Waste, 10

Spatiotemporal Characteristics of Near-Bed Pressure Gradients on a Barred Beach, 2059

Stabilized Dredged Material. I: Parametric Study, 875

Stabilized Dredged Material. II: Geomechanical Behavior, 876

Stabilized Dredged Material. III: Mineralogical Perspective, 877

State Boundary Surfaces for an Aged Compacted Clay, 897

Subcritical Contraction for Improved Open-Channel Flow Measurement Accuracy with an Upward-Looking ADVM, 1269

"Three Little Pigs" Project: Hurricane Risk Mitigation by Integrated Wind Tunnel and Full-Scale Laboratory Tests, 2093

Undular Tidal Bores: Basic Theory and Free-Surface Characteristics, 1041

Lagoons

Benthal Solids Properties Influencing ASB Design and Operating Practices, 633

Lakes

Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682

Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629

Draining the Tangjiashan Barrier Lake, 1037

Energy Dissipative Plunging Flows, 996

Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746

General Model to Represent Multiple Wetland and Lake Stage-Storage Behavior, 1134
Horizontal Dispersion in Gyres-Internal Wave Flow Field in a Rotating Circular Lake, 1115
Lake Effect in Wellhead Protection, 2000
Modification of the Lake Flow Algorithm of the Distributed Hydrological Model HYDROTEL When Modeling Lakes with Multiple Outlets, 1151
Phosphorus Budget and Remediation Plan for Big Platte Lake, Michigan, 2017
Robust Multivariate Outlier Detection Methods for Environmental Data, 755
Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Laminated materials

Application of the Analytical Strip Method to Antisymmetric Laminates, 588
Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198
Design and Construction of Modern Bamboo Bridges, 145
Durability of Wet Bond of Hybrid Laminates to Cast-in-Place Concrete, 196
Extension of the Touratier Kinematic Model to Large Strains, Displacements, and Rotations, 587
Fatigue Performance of Tension Steel Plates Strengthened with Prestressed CFRP Laminates, 237
Flax Fiber-Reinforced Glued-Laminated Timber in Tension Perpendicular to the Grain: Experimental Study and Probabilistic Analysis, 1436
Grooving as Alternative Method of Surface Preparation to Postpone Debonding of FRP Laminates in Concrete Beams, 255
Hygrothermoelastic Postbuckling Response of Laminated Composite Plates, 39
In-Plane Stiffness of Semiauxetic Laminates, 576
Structural Upgrade Using Basalt Fibers for Concrete Confinement, 231
Time-Dependent Behavior of Laminated Glass, 1383
Unified Approach to the Characterization of Coupled Composite Laminates: Benchmark Configurations and Special Cases, 64

Land management

Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016
Management of Redeveloped Industrial Areas with Mixed Use in The Netherlands, 1300
Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222
Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232
Valuation of Flood Reductions in the Yellow River Basin under Land Use Change, 1969

Land reclamation

Field Evaluation of Bauxite Residue Neutralization by Carbon Dioxide, Vegetation, and Organic Amendments, 726
Optimal Spacing in an Array of Fully Penetrating Ditches for Subsurface Drainage, 1206
Systems Management Study of a Private Brownfield Renovation, 1945

Land subsidence

Land Subsidence Disaster Survey and Its Economic Loss Assessment in Tianjin, China, 2081
Optimizing Capacity-Expansion Planning of Groundwater Supply System between Cost and Subsidence, 1118

Land surveys

Effect of Historic Land Cover Change on Runoff Curve Number Estimation in Iowa, 1124

Land use

Assessing the Impact of Land Use/Land Cover on Urban Heat Island Pattern in Nanjing City, China, 1957
Controversial Strata Legislation: Catalyst for Housing Regeneration in Singapore, 1299
Effect of Historic Land Cover Change on Runoff Curve Number Estimation in Iowa, 1124
Evaluating Watershed Experiments through Recursive Residual Analysis, 1239
Expert System Approach for Soil Structure Interaction and Land Use, 1931
Highway Improvement Project Rankings due to Uncertain Model Inputs: Application of Traditional Transportation and Land Use Models, 1949
Management of Redeveloped Industrial Areas with Mixed Use in The Netherlands, 1300
Parking Deck's First Flush, 1069
Space Development Modeling of Urban Regions in Developing Countries, 1925
Transit-Oriented Land Planning Model Considering Sustainability of Mass Rail Transit, 1944
Turkish Land Readjustment: Good Practice in Urban Development, 1958
Urban Land-Use Zoning Based on Ecological Evaluation for Large Conurbations in Less Developed Regions: Case Study in Foshan, China, 1929
Using a Distributed Hydrologic Model to Evaluate the Location of Urban Development and Flood Control Storage, 2020
Watershed Management 2010, 2293

Landfills

Aluminum Reactions and Problems in Municipal Solid Waste Landfills, 2126
Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865
Apparatus for Testing the Combined Effects of Deformation and Chemical Exposure on Polymeric Liners, 1365
Beneficial Use of Shredded Tires as Drainage Material in Cover Systems for Abandoned Landfills, 2100
Biocover Performance of Landfill Methane Oxidation: Experimental Results, 702
Compaction Characteristics of Municipal Solid Waste, 882
Considering Carbon Capture and Storage for Energy Generation from Municipal Solid Waste, 698
Development of a Practical Method for the Estimation of Maximum Lateral Displacement in Large Landfills, 2099
Development of EPA OTM 10 for Landfill Applications, 700
Effects of Thickness on the Aging of HDPE Geomembranes, 803
Evaluating the Mobility of Arsenic in Synthetic Iron-Containing Solids Using a Modified Sequential Extraction Method, 635

Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614

Fugitive Methane Emissions from Landfills: Field Comparison of Five Methods on a French Landfill, 701

Insight into Nitrous Oxide Emissions from Biological Wastewater Treatment and Biosolids Disposal, 2112

Life-Cycle Assessment of Waste Management Greenhouse Gas Emissions Using Municipal Waste Combustor Data, 697

Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844

Numerical Examination of a Method for Reducing the Temperature of Municipal Solid Waste Landfill Liners, 703

Performance of North American Bioreactor Landfills. I: Leachate Hydrology and Waste Settlement, 706

Performance of North American Bioreactor Landfills. II: Chemical and Biological Characteristics, 707

Physical Characterization of Municipal Solid Waste for Geotechnical Purposes, 895

Prediction of Long-Term Municipal Solid Waste Landfill Settlement Using Constitutive Model, 2110

Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Secondary Compression of Municipal Solid Wastes and a Compression Model for Predicting Settlement of Municipal Solid Waste Landfills, 843

Shear Strength of Municipal Solid Waste, 10

Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704

Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

Thickness and Hydraulic Performance of Geosynthetic Clay Liners Overlying a Geonet, 828

Tire-Derived Steel for Hydrogen Sulfide Removal in Landfill Cover, 2118

Landscaping

Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185

Evaluation of 10-Year Temperature Differences between Urban and Rural Areas of a Well-Planned, Unindustrialized, and Medium-Sized Turkish Town, Erzincan, 1955

Landslides

Bioengineering Techniques Associated with Soil Nailing Applied to Slope Stabilization and Erosion Control, 2082

Earth Retention Conference 3, 2237

Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783

Extended Fourth-Order Depth-Integrated Model for Water Waves and Currents Generated by Submarine Landslides, 510

Geomechanical Characterization of the Volcaniclastic Material Involved in the 2002 Landslides at Stromboli, 811

Groundwater Modeling for the Analysis of Active Slow-Moving Landslides, 894

Impacts of Unsaturated Zone Soil Moisture and Groundwater Table on Slope Instability, 914

Impulse Product Parameter in Landslide Generated Impulse Waves, 2043

Knowledge-Based Landslide Susceptibility Zonation System, 291

Laboratory Experiments on the Failure of Coarse Homogeneous Sediment Natural Dams on a Sloping Bed, 1033

Large Deformation Finite-Element Analysis of Submarine Landslide Interaction with Embedded Pipelines, 27

Limit Analysis and Stability Charts for 3D Slope Failures, 831

Method of Up-Slope Mitigation Priority for Alishan Mountain Road in Taiwan, 1533

Modeling of Rainfall-Induced Shallow Landslides of the Flow-Type, 782

Morphology and Substrate Control on the Dynamics of Flowlike Landslides, 810

Multicriteria Decision-Making Approach for Highway Slope Hazard Management, 1167

Parametric Solutions for Slide Impact on Pipelines, 866

Quantitative Risk Assessment of Cut-Slope Projects under Construction, 933

Shear Strength in Preexisting Landslides, 868

Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas, 826

Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas

Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Lasers

Integrating Global Positioning System with Laser Technology to Capture As-Built Information during Open-Cut Construction, 1580

Terrestrial Laser Scanning-Based Structural Damage Assessment, 285

Two Methods to Estimate the Spot Size of Terrestrial Laser Scanners, 1781

Lateral forces

Recommendations for Seismic Design of Hybrid Coupled Wall Systems, 2273

Lateral loads

Behavior of Step Tapered Bored Piles in Sand under Static Lateral Loading, 839

Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512

Estimation of Lateral Load Capacity of Rigid Short Piles in Sands Using CPT Results, 779

Evaluation of Lateral Interpretation Criteria for Drilled Shaft Capacity, 885

Experimental Study on Full-Scale Light Frame Wood House under Lateral Load, 1687

Flexural Lateral Load Distribution Characteristics of Sandwich Plate System Bridges: Parametric Investigation, 159

Free-Field Measurements to Disclose Lateral Reaction Mechanism of Piles Subjected to Soil Movements, 806

Group Interaction Effects on Laterally Loaded Piles in Clay, 830

Improved Design of Embedment Depths for Transmission Pole Foundations Subject to Lateral Loading, 2137

Innovative ANN Technique for Predicting Failure/Cracking Load of Masonry Wall Panel under Lateral Load, 296

Lateral Spreading Forces on Bridge Piers and Pile Caps in Laterally Spreading Soil: Effect of Angle of Incidence, 928

Nonlinear Efficiency of Bored Pile Group under Lateral Loading, 936

Parametric Solutions for Slide Impact on Pipelines, 866

Seismic Behavior of Batter Piles: Elastic Response, 891

Theoretical p-y Curves for Laterally Loaded Single Piles in Undrained Clay Using Bezier Curves, 800

Undrained Lateral Pile Response in Sloping Ground, 918

Lateral pressure

Design of Tall Formworks by a Finite-Element Model, 394

Relationship between Probability of Breakage to Maximum Principal Stresses in Window Glass, 78

Undrained Lateral Pile Response in Sloping Ground, 918

Lateral stability

Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536

Stability Capacity and Lateral Bracing Requirements of Wood Beam-Columns, 1628

Stability Capacity of Metal Plate Connected Wood Truss Assemblies, 1679

Lattices

Nearest Neighbor Probabilistic Model for Aluminum Polycrystals, 538

Laws

Consistency and Reliability of Construction Arbitration Decisions: Empirical Study, 1323

Engineering in the Service of Law, 1301

Eurohypothec: Drafting a Common Mortgage for Europe, 1298

Housing Law Is Dead. Long Live European Housing Law?, 1295

Impact of the EU Mediation Directive on the German Construction Sector, 1307

Judging Unreasonable Litigation Behavior at the Interface of Mediation in the English Jurisdiction, 1306

Mediation for Public Construction Contracts under the GPA in Taiwan, 1305

Layered soils

Influence of Nonlinearity on the Stress Distribution in the Soil—Application to Road Engineering Problems, 1797

Nonlinear Analysis of Torsionally Loaded Piles in a Two-Layer Soil Profile, 18

Layered systems

Analytical Solutions for Contaminant Diffusion in Double-Layered Porous Media, 923

Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500

Leaching

Bench-Scale Evaluation of Chemically Bonded Phosphate Ceramic Technology to Stabilize Mercury Waste Mixtures, 639

Contaminant Leaching from Stabilized/Solidified Acid Tars, 764

Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660

Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232

Lead

Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668

Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116

Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657

Laboratory-Scale Flotation Process for Treatment of Soils Contaminated with Both PAH and Lead, 728

Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660

Leadership

Breaking into the Men's Room: Five Traits of Women Engineers with a Boardroom Seat, 2074

Engineering Leadership and Management during Financial Crisis, 2062

"If These Women Can Do It, I Can Do It, Too": Building Women Engineering Leaders through Graduate Peer Mentoring, 2076

Impact of the Leadership in Energy and Environmental Design Accredited Professional Credential on Design Professionals, 1594

Leadership Flexibility Space, 1333

Leading, Learning, and Living the Shackleton Way: Education and Practice, 2066

LEED Implementation Guide for Construction Practitioners, 85

Organizational Divisions in BIM-Enabled Commercial Construction, 360

Perspectives on Leadership from Female Engineering Deans, 2077

Positive Psychological Capital as a Source of Sustainable Competitive Advantage for Organizations, 348

Revisiting the Gathering Storm, 2222

Special Report: The Infrastructure Roundtables: Concluding Thoughts— Increase Federal Leadership In Infrastructure, 2180

Special Report: The Infrastructure Roundtables: Increase Federal Leadership in Infrastructure, 2174

Successful Leadership Development for Women STEM Faculty, 2075

Washington State's I-405 Project: Women in Industry Leadership, 2073

Leakage

Automated Detection and Location of Leaks in Water Mains Using Infrared Photography, 1519

Case Studies of Leak Detection and Location in Water Pipe Systems by Inverse Transient Analysis, 1984

Development and Verification of an Online Artificial Intelligence System for Detection of Bursts and Other Abnormal Flows, 1990

Diagnostic Curves for Identifying Leaky Aquifer Parameters with or without Aquitard Storage, 1204

Plane-Strain Propagation of a Fluid-Driven Crack in a Permeable Rock with Fracture Toughness, 574

Pressure-Dependent Leak Detection Model and Its Application to a District Water System, 1970

RTC of Valves for Leakage Reduction in Water Supply Networks, 1973

Simple Method for Quick Estimation of Leaky-Aquifer Parameters, 1217

Slab-on-Grade versus Framed Slab, 94

Lean construction

Assessing the Environmental Impacts of a Lean Supply System: Case Study of High-Rise Condominium Construction in Korea, 92

Critical Concerns of Production Control System on Projects with Labor Constraints: Lessons from a Residential Case Study, 1332

Design Structure Matrix Implementation on a Seismic Retrofit, 1331

Empire State Building Project: Archetype of "Mass Construction", 384

Improving Planning Reliability and Project Performance Using the Reliable Commitment Model, 426

Interaction of Lean and Building Information Modeling in Construction, 411

Tolerance and Constructability of Soldier Piles in Slurry Walls, 1507

Least squares method

Estimation of Unsaturated Hydraulic Parameters from Infiltration and Internal Drainage Experiments, 1283

Increasing the Efficacy of the Conventional Deformation Analysis Methods: Alternative Strategy, 1773

OPUS-RS Pair Points: Case Study, 1777

Three-Stage Least-Squares Analysis of Time and Cost Overruns in Construction Contracts, 434

Lebanon

Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Legal factors

Consistency and Reliability of Construction Arbitration Decisions: Empirical Study, 1323

International Instruments on Housing Rights, 1294

Legal Issues of Integrated Network for Construction and Real Estate Sector, 1313

Management of Redeveloped Industrial Areas with Mixed Use in The Netherlands, 1300

Political, Economic, and Legal Risks Faced in International Projects: Case Study of Vietnam, 1597

Relief from Bid Mistakes, 1304

Scoring Approach to Construction Bond Underwriting, 410

When the Cold Wind Blows: Legal Strategies against Ghettoization in Denmark, 1297

Legislation

Controversial Strata Legislation: Catalyst for Housing Regeneration in Singapore, 1299

Impact of the EU Mediation Directive on the German Construction Sector, 1307

Length

Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550

Levees

Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045

So, You Live Behind a Levee! What you should know to protect your home and loved ones from floods, 2279

Leveling

Evaluation and Adaptation of the EGM2008 Geopotential Model along the Northern Nile Valley, Egypt: Case Study, 1770

Minimum Moment Method for Resource Leveling Using Entropy Maximization, 366

Liability

Is Construction Blasting Still Abnormally Dangerous?, 1311

Legal Issues of Integrated Network for Construction and Real Estate Sector, 1313

Monitoring System to Provide Assurance for Maintenance of Structures, 2128

Licensing

Occupational Licensing of Building Trades: Case of Western Australia, 1603

Principles and Practice of Engineering, 2271

Life cycles

Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312

Asset Management for Urban Wastewater Pipeline Networks, 1174

Cost-Effectiveness of Green Roofs, 91

Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194

Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128

Field Procedures for Real-World Measurements of Emissions from Diesel Construction Vehicles, 1186

Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554

Life-Cycle Assessment Modeling of Construction Processes for Buildings, 1184

Life-Cycle Assessment of Waste Management Greenhouse Gas Emissions Using Municipal Waste Combustor Data, 697

Life-Cycle Cost Analysis of Highway Intersection Safety Hardware Improvements, 1803

Life-Cycle Costs of Commercial Roof Systems, 79

Life-Cycle Management of Construction Projects Based on Virtual Prototyping Technology, 1321

Life-Cycle Optimization of Pavement Overlay Systems, 1195

Life-Cycle Perspective on Residential Water Conservation Strategies, 1166

Loads on Track, Ballast Fouling, and Life Cycle under Dynamic Loading in Railways, 1904

Novel Approach for Multicriteria Optimization of Life-Cycle Preventive and Essential Maintenance of Deteriorating Structures, 1707

Performance of Bridge Materials by Structural Deficiency Analysis, 1530

Pipelines 2010, 2268

Prediction of Life-Cycle Expenditure for Different Categories of Council Buildings, 1551

Quantification of the Environmental Benefits of Ultrafine/Nanotitanium Dioxide Photocatalyst Coatings for Concrete Pavement Using Hybrid Life-Cycle Assessment, 1179

Special Report: The Infrastructure Roundtables: Address Life-Cycle Costs and Ongoing Maintenance, 2177

Special Report: The Infrastructure Roundtables: Concluding Thoughts—Address Life-Cycle Costs and Ongoing Maintenance, 2183

Lifeline systems

Certifying That Existing Suspended Scaffold Structural Support Elements and Lifeline Anchorages Comply with Federal OSHA Requirements, 2149

Comparative Assessment of Civil Infrastructure Network Performance under Probabilistic and Scenario Earthquakes, 1162

Designing Suspended Scaffold Structural Support Elements and Lifeline Anchorages in Conformance with Federal OSHA Requirements, 2148

Kashiwazaki, Japan, Earthquake of July 16, 2007, 2261

Lifting

Monitoring and Modeling Grout Efficiency of Lifting Structure in Soft Clay, 35

Light, artificial

Development and Testing of a Fluorescent Fiber Solar Concentrator for Remote Daylighting, 455

Roadway Lighting Shows Safety Benefits at Rural Intersections, 1891

Lightning

Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235

Lightweight concrete

Dynamic Properties of Lightweight Concrete Beams Made by Sedimentary Lightweight Aggregate, 1408

Effect of Mixing Constituent toward Engineering Properties of POFA Cement-Based Aerated Concrete, 1372

Response of Spiral-Reinforced Lightweight Concrete to Short-Term Compression, 1491

Shear Strength of a Lightweight Self-Consolidating Concrete Bridge Girder, 152

Lime

Addressing Sulfate-Induced Heave in Lime Treated Soils, 784

Compaction Characteristics and Bearing Ratio of Pond Ash Stabilized with Lime and Phosphogypsum, 1378

Improvement of Problematic Soils by Lime Slurry Pressure Injection: Case Study, 915

Quality Assessment and Quality Control of Deep Soil Mixing Construction for Stabilizing Expansive Subsoils, 785

Triaxial Frequency Sweep Characterization of Asphalt-Aggregate Adhesion in Saskatchewan Asphaltic Mixes, 1806

Limestone

Forensic Investigations to Evaluate Sulfate-Induced Heave Attack on a Tunnel Shotcrete Liner, 1446

Fresh and Hardened Properties of SCC Made with Different Aggregate and Mineral Admixtures, 1458

Properties of SCC Produced with Limestone Filler or Viscosity Modifying Admixture, 1379

Relationship between Texas Cone Penetrometer Tests and Axial Resistances of Drilled Shafts Socketed in Clay Shale and Limestone, 888

Limit analysis

Face Stability Analysis of Circular Tunnels Driven by a Pressurized Shield, 794

Limit Analysis and Stability Charts for 3D Slope Failures, 831

Seismic Displacement of Slopes Reinforced with Piles, 860

Undrained Capacity of Plate Anchors under General Loading, 908

Limit equilibrium

Effects of Strain Localization on Seismic Active Earth Pressures, 873

Evaluation of Interslice Force Function and Discussion on Convergence in Slope Stability Analysis by the Lower Bound Method, 883

Observations on Limit Equilibrium–Based Slope Reliability Problems with Inclined Weak Seams, 581

Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852

Optimum Design of Bridge Abutments under Seismic Conditions: Reliability-Based Approach, 112

Probabilistic Assessment of Slope Stability That Considers the Spatial Variability of Soil Properties, 870

Required Unfactored Strength of Geosynthetic in Reinforced Earth Structures, 801

Resultant Force of Lateral Earth Pressure in Unstable Slopes, 934

Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Limit states

New Multidimensional Visualization Technique for Limit-State Surfaces in Nonlinear Finite-Element Reliability Analysis, 597

Reliability-Based Evaluation of Flexural Members Strengthened with Externally Bonded Fiber-Reinforced Polymer Composites, 1721

Safety of Structures in Strong Winds and Earthquakes: Multihazard Considerations, 1640

Stress-Strain Responses of Block Samples of Compressible Chicago Glacial Clays, 790

Linear analysis

Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316

Liners

Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865

Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844

Numerical Examination of a Method for Reducing the Temperature of Municipal Solid Waste Landfill Liners, 703

Performance of North American Bioreactor Landfills. I: Leachate Hydrology and Waste Settlement, 706

Linings

Apparatus for Testing the Combined Effects of Deformation and Chemical Exposure on Polymeric Liners, 1365

Thickness and Hydraulic Performance of Geosynthetic Clay Liners Overlying a Geonet, 828

Liquids

Effect of Wall Flexibility on Dynamic Response of Concrete Rectangular Liquid Storage Tanks under Horizontal and Vertical Ground Motions, 1652

Litigation

Judging Unreasonable Litigation Behavior at the Interface of Mediation in the English Jurisdiction, 1306

Ka Loko Dam Break, 1310
Predicting the Outcome of Construction Litigation Using an Integrated Artificial Intelligence Model, 269

Littoral currents
Moments-Based Reduced Spectral Wave Modeling of Frequency-and-Directional Spreading Effects on Wave-Induced Longshore Currents, 2047

Live loads
Load Configuration and Lateral Distribution of NATO Wheeled Military Trucks for Steel I-Girder Bridges, 165

Load and resistance factor design
Current Design and Construction Practices of Bridge Pile Foundations with Emphasis on Implementation of LRFD, 166
Distribution Factors for Short-Haul Vehicular Loads on Prestressed Concrete Open Box Beam (U-Beam) Bridges, 2140
Earth Retention Conference 3, 2237
Influence of Spatially Variable Side Friction on Single Drilled Shaft Resistance and LRFD Resistance Factors, 884
LRFD Factors for Pultruded Wide-Flange Columns, 1663
Relaxing the Stud Spacing Limit for Full-Depth Precast Concrete Deck Panels Supported on Steel Girders (Phase I), 140
Safety Assessment of a Steel Frame Using LRFD and SBRA Methods, 2136

Load bearing capacity
Assessment of Construction Joint Effect in Full-Scale Concrete Beams by Acoustic Emission Activity, 547
Behavior of Hollow Tubular-Flange Girder Systems for Curved Bridges, 1624
Characterization of a Roller Seismic Isolation Bearing with Supplemental Energy Dissipation for Highway Bridges, 1658
Durability of Wet Bond of Hybrid Laminates to Cast-in-Place Concrete, 196
Experimental Study of Eccentrically Loaded Raft with Connected and Unconnected Short Piles, 909
Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710
Numerical Study of the Effect of Verification Core Hole on the Point Bearing Capacity of Drilled Shafts, 900
Simplified Methodology for the Evaluation of the Residual Strength of Corroded Reinforced Concrete Beams, 1506
Strength Prediction for Rounded Dovetail Connections Considering Size Effects, 494
Undrained Bearing Capacity of Strip Footings on Slopes, 840
Undrained Capacity of Plate Anchors under General Loading, 908

Load distribution
Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716
Flexural Lateral Load Distribution Characteristics of Sandwich Plate System Bridges: Parametric Investigation, 159
Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111
Load Configuration and Lateral Distribution of NATO Wheeled Military Trucks for Steel I-Girder Bridges, 165
Wind-Induced Pressures on Patio Covers, 1723
Workload Distribution Framework for the Parallel Solution of Large Structural Models on Heterogeneous PC Clusters, 276

Load factors
Application of Exponential-Based Methods in Integrating the Constitutive Equations with Multicomponent Nonlinear Kinematic Hardening, 606
Art of Foundation Engineering Practice (GSP 198), 2226
Characterization of Rutting (Permanent Strain) Development of A-2-4 and A-4 Subgrade Soils under the HVS Loading, 1534
Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198
Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708
Designing Suspended Scaffold Structural Support Elements and Lifeline Anchorages in Conformance with Federal OSHA Requirements, 2148
End Forces on Crossframes in Horizontally Curved Steel I-Girder Bridges, 2130
Experimental Performance of Full-Depth Precast, Prestressed Concrete Overhang, Bridge Deck Panels, 142
Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477
Guidelines for Electrical Transmission Line Structural Loading, 2253
Importance of the Tail in Truck Weight Modeling for Bridge Assessment, 114
In-Plane Behavior of Clay Masonry Walls: Experimental Testing and Finite-Element Modeling, 1742
Interplanar and Intraplanar Differential Settlement Analyses of Boiler Supporting Structure: Comparative Study, 2138
Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932
Load Vectors for Damage Location in Systems Identified from Operational Loads, 462
Mesoscale Approach to Modeling Concrete Subjected to Thermomechanical Loading, 491
Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-10 (Book), 2263
Modeling Stress-Dilatancy for Sand under Compression and Extension Loading Conditions, 535
Optimizing Structures Subject to Multiple Deflection Constraints and Load Cases Using the Principle of Virtual Work, 1748
Parametric Dependency and Trends of HDD Pull Loads, 1569
Proposed Loading Waveforms and Loading Time Equations for Mechanistic-Empirical Pavement Design and Analysis, 1843
Seismic Loads, 2277

Load history
Load-History Effects on Deformation Capacity of Flexural Members Limited by Bar Buckling, 1606

Load tests
Behavior of Driven Ultrahigh-Performance Concrete H-Piles Subjected to Vertical and Lateral Loadings, 910

Behavior of Step Tapered Bored Piles in Sand under Static Lateral Loading, 839

Certifying That Existing Suspended Scaffold Structural Support Elements and Lifeline Anchorages Comply with Federal OSHA Requirements, 2149

Evaluation of Lateral Interpretation Criteria for Drilled Shaft Capacity, 885

Increased Lateral Abutment Resistance from Gravel Backfills of Limited Width, 795

Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands, 517

Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands

Reduction Factor for the Unloading Point Method at Clay Soil Sites, 837

Load transfer

Load Transfer Characteristics of Aggregate Interlocking in Concrete Pavement, 1810

Structural Behavior of a Pile-Supported Embankment, 777

Loading rates

Comparison of Block-Shear and Whitmore Section Methods for Load Rating Existing Steel Truss Gusset Plate Connections, 110

Effects of Loading Rate and Duration on Axial Behavior of Concrete Confined by Fiber-Reinforced Polymer Sheets, 190

Loads

Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689

Local governments

Assessment of the Pedestrianization Policy in Vigan City: UNESCO World Heritage Site, 1918

Building Capacity through Collaborative Local Action: Case of Matra REGIMA within Zeytinburnu Regeneration Scheme, 1936

Special Report: The Infrastructure Roundtables: Concluding Thoughts—Develop Federal, Regional, and State Infrastructure Plans, 2182

Special Report: The Infrastructure Roundtables: Develop Federal, Regional, and State Infrastructure Plans, 2176

Special Report: The Infrastructure Roundtables: Increase Infrastructure Investment at All Levels of Government, 2178

Localization

Effects of Strain Localization on Seismic Active Earth Pressures, 873

Length Scales Interaction in Nonlocal Plastic Strain Localization of Bars of Varying Section, 561

Load Vectors for Damage Location in Systems Identified from Operational Loads, 462

Mesh Dependence and Nonlocal Regularization of One-Dimensional Strain Softening Plasticity, 594

Numerical Simulation of Damage Localization in Polyester Mooring Ropes, 552

Loess

Experimental Study on Moisture Migration in Unsaturated Loess under Effect of Temperature, 172

Logistics

Exploring the Potential for Predicting Project Dispute Resolution Satisfaction Using Logistic Regression, 365

ICCTP 2010, 2257

ICLEM 2010, 2258

Interactive Process of Microsimulation and Logistic Regression for Short-Term Work Zone Traffic Diversion, 1816

Losses

Learning from Construction Failures due to the 2009 L'Aquila, Italy, Earthquake, 1550

Louisiana

Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628

Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128

Field Damage Survey of New Orleans Homes in the Aftermath of Hurricane Katrina, 2078

Multidisciplinary Assessment of Critical Facility Response to Natural Disasters, 2264

Low flow

Low Flow Scaling with Respect to Drainage Area and Precipitation in Northern Iran, 1077

Regional Frequency Analysis of Low Flow Based on L Moments: Case Study in Karst Area, Southwest China, 1093

Lysimeters

Comparison of Simplified Pan-Based Equations for Estimating Reference Evapotranspiration, 1214

Estimation of Evapotranspiration from Bioretention Areas Using Weighing Lysimeters, 1108

Performance of Penman-Monteith FAO56 in a Semiarid Highland Environment, 1282

Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Machine foundations

New Dynamic Participation Factor for Turbine-Generator Foundations, 2135

Magnetic fields

Feasibility Test of Adaptive Passive Control System Using MR Fluid Damper with Electromagnetic Induction Part, 484

Magnetic levitation trains

Dynamic Simulation of the Maglev Vehicle/Guideway System, 120

Maintenance

Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185

Average Treatment Effect for Modeling Maintenance Work, 1175

Cost Savings Analysis of Performance-Based Contracts for Highway Maintenance Operations, 1189

Critical Analysis of Different Hilbert-Huang Algorithms for Pavement Profile Evaluation, 309

Data and Modeling Issues Faced during the Efficiency Measurement of Road Maintenance Using Data Envelopment Analysis, 1164

Deficiency Analysis of Coastal Buildings toward Storm Damage Reduction, 1508

Determination and Optimization of the Maintenance Frequencies in the Overhead Contact Line System, 1893
Discussion of Criteria for Prioritization of Predictive Maintenance of Building Façades: Survey of 30 Experts, 1529
Effects of Pavement Spatial Variability on Contractor's Management Strategies, 1187
Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130
Efficiency Measurement of Bridge Maintenance Using Data Envelopment Analysis, 1165
Empirical Modeling of Pavement Overlay Crack Progression with Field Data, 1193
Evaluation of the Visibility of Workers' Safety Garments during Nighttime Highway-Maintenance Operations, 1850
Experimental Estimation of the Relative Deterioration of Surface Maintenance Treatments, 1788
Facility Maintenance Performance Perspective to Target Strategic Organizational Objectives, 1513
Formulation and Solution Approaches to the Rail Maintenance Production Gang Scheduling Problem, 1863
Identifying Critical Sources of Bridge Deterioration in Cold Regions through the Constructed Bridges in North Dakota, 146
Ka Loko Dam Break, 1310
Long-Term Wireless Structural Health Monitoring of the Ferriby Road Bridge, 109
Measuring Performance for Building Maintenance Providers, 401
Modeling Blockage Failures in Sewer Systems to Support Maintenance Decision Making, 1559
Monitoring System to Provide Assurance for Maintenance of Structures, 2128
Multicriteria Group Decision-Making Technique for a Low-Class Road Maintenance Program, 1183
Network-Level Infrastructure Management Using Approximate Dynamic Programming, 1173
Novel Approach for Multicriteria Optimization of Life-Cycle Preventive and Essential Maintenance of Deteriorating Structures, 1707
Optimal Maintenance and Repair Policies under Nonlinear Preferences, 1163
Proposal of an Integrated Index for Prioritization of Bridge Maintenance, 126
Safe Operation and Maintenance of Dry Dock Facilities, 2275
Special Report: The Infrastructure Roundtables: Address Life-Cycle Costs and Ongoing Maintenance, 2177
Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103

Maintenance costs

Cost Savings Analysis of Performance-Based Contracts for Highway Maintenance Operations, 1189
Estimation of Highway Maintenance Marginal Cost under Multiple Maintenance Activities, 1881
Inspection, Condition Assessment, and Management Decisions for Commercial Roof Systems, 86

Malaysia

Case Study: Flood Mitigation of the Muda River, Malaysia, 969
Weaving Section Flow Model at the Weaving Area of Malaysian Conventional Roundabout, 1872

Managers

Public versus Private Perceptions on Hiring an External Program Manager, 336

Manganese

Improved Passive Treatment of Acid Mine Drainage in Mushroom Compost Amended with Crab-Shell Chitin, 683

Manholes

Dimensionless Method to Characterize the Mixing Effects of Surcharged Manholes, 975
Integrated Conveyance Condition Assessment Techniques Support Asset Management and Capacity Driven Projects, 1573

Man-made disasters

Knowledge and Data Integration for Modeling of Problems of Risk due to Natural and Man-Made Hazards, 2120
Models for Managing Contingency Construction Operations, 353
Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Mapping

Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries, 1067
Impact of Bridge Rail Geometry on Floodplain Analysis, 1156
Knowledge-Based Landslide Susceptibility Zonation System, 291
Numerical Age and Residence-Time Mapping for a Small Tidal Creek: Case Study, 2049
Regional Estimation of Reference Evapotranspiration in Arid and Semiarid Regions, 1279

Marine terminals

Containing the Constraints, 2190
Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525
Kernel-Based Machine Learning Models for Predicting Daily Truck Volume at Seaport Terminals, 1911
Modeling Road Traffic Demand of Container Consolidation in a Chinese Port Terminal, 1883
Ports 2010, 2270
Simplified Procedure for Seismic Evaluation of Piles with Partial-Moment Connection to the Deck in Marine Oil Terminals, 1660

Markov process

Deterioration Rates of Typical Bridge Elements in New York, 134
Inspection, Condition Assessment, and Management Decisions for Commercial Roof Systems, 86
Markov and Neural Network Models for Prediction of Structural Deterioration of Storm-Water Pipe Assets, 1180
Models for Managing Contingency Construction Operations, 353
Network-Level Infrastructure Management Using Approximate Dynamic Programming, 1173

Maryland

Estimating Alongshore Sediment Transport and the Nodal Point Location on the Delaware–Maryland Coast, 2042
Forecasting Cybercar Use for Airport Ground Access: Case Study at Baltimore Washington International Airport, 1938

Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129
Review of Bioretention System Research and Design: Past, Present, and Future, 710
Thermal Reduction by an Underground Storm-Water Detention System, 671

Masonry

Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674
Analytical Investigation of Lateral Strength of Masonry Infilled RC Frames Retrofitted with CFRP, 1526
Cabin John Bridge: Role of Alfred L. Rives, C.E., 1514
Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751
Comparative Analysis on the Seismic Behavior of Combined RC-Masonry Buildings, 1752
Constitutive Models for Tuff Masonry under Uniaxial Compression, 1467
Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502
Dynamic Response of Retrofitted Masonry Walls for Blast Loading, 542
Evaluation of Masonry Deep Beams Externally Strengthened with CFRP Sheets, 191
Experimental Analysis of Reinforced Concrete Block Masonry Walls Subjected to In-Plane Cyclic Loading, 1653
Experimental Behavior of FRP Strengthened Masonry Arches, 207
Finite-Element Analysis and Vibration Testing of a Two-Span Masonry Arch Bridge, 1499
Finite-Element Modeling of Nonlinear Behavior of Masonry-Infilled RC Frames, 1635
FRP Confinement of Tuff and Clay Brick Columns: Experimental Study and Assessment of Analytical Models, 235
FRP-Retrofitted URM Walls under In-Plane Shear: Review and Assessment of Available Models, 249
In-Plane Behavior of Clay Masonry Walls: Experimental Testing and Finite-Element Modeling, 1742
In-Plane Behavior of Partially Grouted Reinforced Concrete Masonry Shear Walls, 1715
In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. I: Experimental Investigation, 250
In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. II: Finite-Element Model, 251
Investigating the Effects of Curing Methods on the Compressive Strength of Bitublock, 1362
Lateral Out-of-Plane Strengthening of Masonry Walls with Composite Materials, 214
Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420
Nondestructive Investigation of Wet Building Material: Multimethodical Approach, 1543
Nondestructive Testing Evaluation of Drying Process in Flooded Full-Scale Masonry Walls, 1544
Nonlinear Analysis of Masonry Arches Strengthened with Composite Materials, 557
Out-of-Plane Flexural Performance of GFRP-Reinforced Masonry Walls, 192
Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176
Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572
Seismic Performance Parameters for Reinforced Concrete-Block Shear Wall Construction, 1495
Shear Capacity of the Flange-Web Intersections of Brick Masonry Nonrectangular Sections, 1665
Simplified Method for the Seismic Analysis of Masonry Shear-Wall Buildings, 1659
Static and Cyclic Out-of-Plane Response of Masonry Walls Strengthened Using Textile-Mortar System, 1475
Structural Analyses and Assessment of Historical Kamanlı Mosque in Izmir, Turkey, 1531
Techniques for Predicting Cracking Pattern of Masonry Wallet Using Artificial Neural Networks and Cellular Automata, 277
Unreinforced Concrete Masonry Walls Strengthened with CFRP Sheets and Strips under Pendulum Impact, 252
Wet Lay-Up Manufactured FRPs for Concrete and Masonry Repair: Influence of Water on the Properties of Composites and on Their Epoxy Components, 257

Mass

Evaluation of the Advection Scheme in the HSPF Model, 1075

Mass transfer

Effectiveness of Source-Zone Remediation of DNAPL-Contaminated Subsurface Systems, 663

Mass transport

Application of a Mass Balance-Based Stochastic Transport Model, 2113

Massachusetts

Locked or Liberated: East Somerville, a Transit-Oriented Development Opportunity, 2067
Transparent Beauty, 2207
Transparent Beauty

Mat foundations

Practical Subgrade Model for Improved Soil-Structure Interaction Analysis: Software Implementation, 2157

Material failures

Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532
Strength Prediction for Rounded Dovetail Connections Considering Size Effects, 494

Material properties

Assessing Reliability and Potentiality of Nonnuclear Portable Devices for Asphalt Mixture Density Measurement, 1442
Characterization of Organic Surfactant on Montmorillonite Nanoclay to Be Used in Bitumen, 1431
Characterization of the Tensile Viscoelastic Properties of an Undamaged Asphalt Mixture, 1808
Comprehensive Evaluation of AIMS Texture, Angularity, and Dimension Measurements, 1381
Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634
Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235

Determination of Shear and Bulk Moduli of Viscoelastic Solids from the Indirect Tension Creep Test, 565
Effect of Mixing Constituent toward Engineering Properties of POFA Cement-Based Aerated Concrete, 1372
Effect of Temperature on the Setting Behavior of Concrete, 1363
Effect of Various Organomodified Montmorillonites on the Properties of Montmorillonite/Bitumen Nanocomposites, 1430
Estimation of Influence Tensors for Eigenstressed Multiphase Elastic Media with Nonaligned Inclusion Phases of Arbitrary Ellipsoidal Shape, 562
Femtotechnology: Design of the Strongest AB Matter for Aerospace, 69
Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542
Interactions of Granite and Asphalt Based on the Rheological Characteristics, 1435
Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420
Nonlinear Unified Strength Criterion for Concrete under Three-Dimensional Stress States, 464
Parametric Study of Posttensioned Inverted-T Bridge System for Improved Durability and Increased Span-to-Depth Ratio, 164
Paving Materials and Pavement Analysis (GSP 203), 2267
Research on High- and Low-Temperature Properties of Asphalt-Mineral Filler Mastic, 1434
Structural Steel ASTM A709—Behavior at Uniaxial Tests Conducted at Lowered and Elevated Temperatures, Short-Time Creep Response, and Fracture Toughness Calculation, 567
Temperature Effects on Material Behavior of Aerospace Aluminum Alloys for Subsonic and Supersonic Aircraft, 53
Wet Lay-Up Manufactured FRPs for Concrete and Masonry Repair: Influence of Water on the Properties of Composites and on Their Epoxy Components, 257

Material tests

Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423
Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542
Pavements and Materials, 2266
Postprocessing Method for Dynamic Modulus Tests of Hot-Mix Asphalt, 1415
Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Mathematical models

Application of Natural Clayey Soil as Adsorbent for the Removal of Copper from Wastewater, 769
Backward Probabilistic Modeling to Identify Contaminant Sources in Water Distribution Systems, 2018
Ballistic Walking Design via Impulsive Control, 54
Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701
Determination of the Transverse Resistance Characteristics in Railway Track, 1902
Energy Audit of Water Networks, 2027
Factors Affecting Participation in Spot and Options Markets for Water, 2004
Hybrid Model Incorporating Real Options with Process Centric and System Dynamics Modeling to Assess Value of Investments in Alternative Dispute Resolution Techniques, 300
Kaolinite and Lead in Saturated Porous Media: Facilitated and Impeded Transport, 756
Mathematical Model for the Sequestering of Chemical Contaminants by Magnetic Particles, 750
Modeling the Temperature Dependence of Adsorption Equilibriums of VOC(s) onto Activated Carbons, 620
Modeling VOC Emissions in the High-Purity Oxygen Activated Sludge Process, 743
Multiagent System for Construction Dispute Resolution (MAS-COR), 345
New Relationships for Equilibrium Shaped Bays, 2050
Origin-Based Partial Linearization Method for the Stochastic User Equilibrium Traffic Assignment Problem, 1794
Probabilistic Approach for Budgeting in Portfolio of Projects, 350
SCIA: GIS-Based Software for Assessing the Impacts from Chemical Industrial Accidents, 2106
Study of Real Options with Exogenous Competitive Entry to Analyze Dispute Resolution Ladder Investments in Architecture, Engineering, and Construction Projects, 352
Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Mathematics

Design of Settling Basins in Irrigation Network Using Simulation and Mathematical Programming, 1210

Matrices, mathematics

Load Vectors for Damage Location in Systems Identified from Operational Loads, 462

Matrix methods

Development and Validation of a Two-Phase Model for Reinforced Soil by Considering Nonlinear Behavior of Matrix, 530
Estimation of a Sensitivity-Based Metric for Detecting Market Power, 450
Innovative ANN Technique for Predicting Failure/Cracking Load of Masonry Wall Panel under Lateral Load, 296
Modeling Unsteady Open-Channel Flow for Controller Design, 1243
Natural Vibrations of Open-Variable Thickness Circular Cylindrical Shells in High Temperature Field, 62

Meandering streams

Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047

Measurement

3D Surface Modeling and Measuring System for Pneumatic Caisson, 282
Accuracy of Ground-Penetrating Radar for Concrete Pavement Thickness Measurement, 1558
Aggradation of Irrigation Canal Network in Žitný Ostrov, Southern Slovakia, 1247
Alternating Direction Implicit Method-Based Nonlinear Filtering for Relative Orbit Estimation, 60
Assessing the Accuracy of Applying Photogrammetry to Take Geometric Measurements on Building Products, 339
Bidirectional Pedestrian Stream Model with Oblique Intersecting Angle, 1815

Blast Limits for Transmission Structures. I: Response Spectra Development, 1500
Characterization of Cementitiously Stabilized Granular Materials for Pavement Design Using Unconfined Compression and IDT Testings with Internal Displacement Measurements, 1396
Comprehensive Evaluation of AIMS Texture, Angularity, and Dimension Measurements, 1381
Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706
Critical Assessment of Interstory Drift Measurements, 1760
Damage Identification in a Truss Tower by Regularized Model Updating, 1637
Data and Modeling Issues Faced during the Efficiency Measurement of Road Maintenance Using Data Envelopment Analysis, 1164
Densimetric Monitoring Technique for Suspended-Sediment Concentrations, 949
Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502
Effect of Preconstruction Planning Effort on Sheet Metal Project Performance, 338
Effective Porosity Measurement of a Marine Clay, 689
Efficiency Measurement of Bridge Maintenance Using Data Envelopment Analysis, 1165
Efficient Model Correction Method with Modal Measurement, 468
Establishing Soil-Water Characteristic Curve of a Fine-Grained Soil from Electrical Measurements, 847
Field Measurements of Mean Velocity Characteristics of a Large-Diameter Swirling Jet, 1007
Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97
Front and Side View Image Correlation Measurements on FRP to Concrete Pull-Off Bond Tests, 222
Fuzzy Nonlinear Regression Approach to Stage-Discharge Analyses: Case Study, 1060
Geostatistical Analysis for Spatially Referenced Roller-Integrated Compaction Measurements, 853
Geotechnical Characterization Field Measurement, and Laboratory Testing of Municipal Solid Waste, 2248
Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111
Identification and Monitoring of Modal Parameters in Aircraft Structures Using the Natural Excitation Technique (NExT) Combined with the Eigensystem Realization Algorithm (ERA), 49
Impact of Heterogeneity on Gamma-Spectrometry Data at Nondestructive Assay of Radioactive Waste, 2117
Impact of Resources and Strategies on Construction Company Performance, 1318
Influence of Rocking Motion on Vibratory Roller-Based Measurement of Soil Stiffness, 546
Long-Term Field Performance of Cold In-Place Recycled Roads in Iowa, 1522
Measuring Performance for Building Maintenance Providers, 401
Mixed Method Research: Fundamental Issues of Design, Validity, and Reliability in Construction Research, 325
Multimodel Structural Performance Monitoring, 1736
Nearest Neighbor Probabilistic Model for Aluminum Polycrystals, 538
Nonintrusive Method for Detecting Particle Movement Characteristics near Threshold Flow Conditions, 1284
Nonlinear Identification of Lumped-Mass Buildings Using Empirical Mode Decomposition and Incomplete Measurement, 486
Observation on Particulate Matter over a Period of 3 Years at Kaikhali (22.022°N and 88.614°E) inside a Special Mangrove Ecosystem: Sundarbans, 622
Propagation of an Unmodeled Additive Constant in Range Sensor Observations, 1779
Reconstruction Method for Damage Detection in Beams Based on Natural Frequency and Antiresonant Frequency Measurements, 492
Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004
Soil Moisture Measurements: Comparison of Instrumentation Performances, 1208
Strength Measurement for Near-Seabed Surface Soft Soil Using Manually Operated Miniature Full-Flow Penetrometer, 925
Three-Dimensional Structural Translation and Rotation Measurement Using Monocular Videogrammetry, 540
Two-Dimensional LDV Measurement, Modeling, and Optimal Design of Rectangular Primary Settling Tanks, 669
Variability of the Compressive Strength of Parallel Strand Lumber, 499
Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Mechanical properties

Application of Results of Nondestructive Testing Methods in the Investigation of Microstructure of Refractory Concretes, 1439
Behavior of GFRP Reinforcing Bars Subjected to Extreme Temperatures, 211
Behavior of RC Beams Retrofitted with CARDIFRC after Thermal Cycling, 1342
Carbon Neutral Off-White Rice Husk Ash as a Partial White Cement Replacement, 1464
Carbonation Curing of Slag-Cement Concrete for Binding CO_2 and Improving Performance, 1373
Constitutive Models for Tuff Masonry under Uniaxial Compression, 1467
Design of Tall Formworks by a Finite-Element Model, 394
Effects of Calcium Carbide Residue–Fly Ash Binder on Mechanical Properties of Concrete, 1474
Effects of Water-Binder Ratio and Fine Aggregate–Total Aggregate Ratio on the Properties of Hwangtoh-Based Alkali-Activated Concrete, 1443
Experimental Study and Theoretical Models on Compressive Properties of Ultrahigh Toughness Cementitious Composites, 1463
Fresh, Mechanical, and Durability Characteristics of Self-Consolidating Concrete Incorporating Volcanic Ash, 1414
Full-Scale Field Testing for Verification of Mechanical Properties of Polyurethane Foams for Use as Backfill in PCC Repairs, 1367
Impact of Polypropylene Application Method on Long-Term Aging of Polypropylene-Modified HMA, 1456
Investigation of Flexural Properties of Cement-Stabilized Macadam Reinforced with Polypropylene Fiber, 1489

Mechanical Properties of Steel-FRP Composite Bar under Uniaxial and Cyclic Tensile Loads, 1462
Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213
Proportioning Design and Mechanical Properties Research of Polypropylene Fiber and Polymer Emulsion Reinforced Cement Mortar, 1364
Residual Mechanical Properties of High-Strength Concretes after Exposure to Elevated Temperatures, 1346
Stabilized Dredged Material. III: Mineralogical Perspective, 877
Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212
Thermal and Mechanical Properties at High Temperature of a Very High-Strength Durable Concrete, 1402
Three-Dimensional Finite-Element Modeling of Nailed Connections in Wood, 1678
Toward Monte Carlo Simulation-Based Mechanistic-Empirical Prediction of Asphalt Pavement Performance, 1860

Mechanical systems

Organizational Divisions in BIM-Enabled Commercial Construction, 360

Mechanics

Variability of the Compressive Strength of Parallel Strand Lumber, 499

Membranes

Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665
Establishing Soil-Water Characteristic Curve of a Fine-Grained Soil from Electrical Measurements, 847
Evaluation of Apparatus for Membrane Cleaning Tests, 740
Large Membrane Roof Analysis: Nonlinear Modeling of Structures, Connectors, and Experimental Evidences, 93
Pilot-Scale Evaluation of Chemical Cleaning Protocols for Organic and Biologically Fouled Microfiltration Membranes, 674
Tensile Membrane Structure, 2287

Memoirs of deceased members

Fox, Gerard Francis, 2297
Groff, Edward Owen, 2298
Meier, Frederick J., 2299
Olmsted, Robert A.: ASCE Fellow, 2300

Mercury

Bench-Scale Evaluation of Chemically Bonded Phosphate Ceramic Technology to Stabilize Mercury Waste Mixtures, 639
Electron Beam Irradiation for Mercury Oxidation and Mercury Emissions Control, 675
Simulating the Effect of Sulfate Addition on Methylmercury Output from a Wetland, 651

Mesh generation

Two-Dimensional Depth-Averaged Flow Modeling with an Unstructured Hybrid Mesh, 942

Metals, chemical

Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628
Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629

Meteorology

Regional Bivariate Frequency Analysis of Meteorological Droughts, 1154

Methane

Aerobic Methane Oxidation Coupled to Denitrification: Kinetics and Effect of Oxygen Supply, 632
Development of EPA OTM 10 for Landfill Applications, 700
Diverting Electron Fluxes to Hydrogen in Mixed Anaerobic Communities Fed with Glucose and Unsaturated C18 Long Chain Fatty Acids, 677
Life-Cycle Assessment of Waste Management Greenhouse Gas Emissions Using Municipal Waste Combustor Data, 697
Performance of North American Bioreactor Landfills. II: Chemical and Biological Characteristics, 707

Methodology

Charrettes as a Method for Engaging Industry in Best Practices Research, 321
Considering Attitudes in Strategic Negotiation over Brownfield Disputes, 1315
Contextualist Research: Iterating between Methods While Following an Empirically Grounded Approach, 326
Design Structure Matrix Implementation on a Seismic Retrofit, 1331
Implementing Observational Research Methods to Study Team Performance in Construction Management, 322
Indo-U.S. Forensic Practices, 2260
Laboratory Study of Unidirectional Focusing Waves in Intermediate Depth Water, 467
Median-Based Estimates and Their Application in Controlling Reference Mark Stability, 1772
Methodology for Conducting Discrete-Event Simulation Studies in Construction Engineering and Management, 315
Methodology for Written and Oral Presentation of Research Results, 1593
Mixed Method Research: Fundamental Issues of Design, Validity, and Reliability in Construction Research, 325
Multivariate Statistical Approach to Structural Damage Detection, 460
Opportunities for Efficient and Environmentally Friendly Energy Systems: BMC Case Study in Lobatse, Botswana, 453
Program Assessment and Evaluation Using Student Grades Obtained on Outcome-Related Course Learning Objectives, 1602
Qualitative Research: Application of the Delphi Method to CEM Research, 324
Research Validation: Challenges and Opportunities in the Construction Domain, 327
Soil Moisture Profile Development from Surface Observations by Principle of Maximum Entropy, 1089
Transformation of the Sandler and Rubin Nonsmooth Cap Model to the Pelessone Smooth Cap Model, 526
Using Fuzzy Logic and Expert System Approaches in Evaluating Flexible Pavement Distress: Case Study, 1805

Mexico
Seismic Fragility Formulations for Segmented Buried Pipeline Systems Including the Impact of Differential Ground Subsidence, 1579

Michigan
Phosphorus Budget and Remediation Plan for Big Platte Lake, Michigan, 2017
Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704

Micro piles
New Structural Model for Multicomponent Pile Cross Sections under Axial Load, 859

Microbes
Distribution of the Microbial Community Structure in Sulfur-Based Autotrophic Denitrification Columns, 666
SSPRSD Using a Filamentous Fungal Strain *Penicillium expansum BS30* Isolated from Wastewater Sludge, 694
Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171

Micromechanics
Calibration of the SMCS Criterion for Ductile Fracture in Steels: Specimen Size Dependence and Parameter Assessment, 598
Coupled Micromechanical Model of Moisture-Induced Damage in Asphalt Mixtures, 1382
Determining Hardness and Elastic Modulus of Asphalt by Nanoindentation, 22
Estimation of Influence Tensors for Eigenstressed Multiphase Elastic Media with Nonaligned Inclusion Phases of Arbitrary Ellipsoidal Shape, 562
Investigation of the Curing Mechanism of Foamed Asphalt Mixes Based on Micromechanics Principles, 1343
Micromechanical Explanation of Elasticity and Strength of Gypsum: From Elongated Anisotropic Crystals to Isotropic Porous Polycrystals, 483
Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials, 518
Micromechanical Modeling for Inherent Anisotropy in Granular Materials, 539
Modeling Stress-Dilatancy for Sand under Compression and Extension Loading Conditions, 535
Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410
Soil Behavior and Geo-Micromechanics (GSP 200), 2280
Study on Strain-Rate Sensitivity of Cementitious Composites, 566

Microscopy
Nanoscale Evaluation of Moisture Damage in Polymer Modified Asphalts, 1421

Microstructures
Application of Results of Nondestructive Testing Methods in the Investigation of Microstructure of Refractory Concretes, 1439
Behavior of GFRP Reinforcing Bars Subjected to Extreme Temperatures, 211
Micromechanical Explanation of Elasticity and Strength of Gypsum: From Elongated Anisotropic Crystals to Isotropic Porous Polycrystals, 483
Microporosity Structure of Coarse Granular Soils, 912
Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213
Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410
Simple Three-Step Analytical Scheme for Prediction of Elastic Moduli of Hardened Cement Paste, 1478
Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212

Microtunneling
Modeling Microtunneling Projects using Computer Simulation, 381
Ranking of the Factors Affecting Productivity of Microtunneling Projects, 1566

Microwaves
Degradation of Chlorobenzene in Water Using Nanoscale Cu Coupled with Microwave Irradiation, 658
Efficient Microwave Technology to Immobilize Heavy Metal Copper (Cu) Contaminated Soil by Microwave Energy, 2097
Microwave-Enhanced Thermal Desorption of Polyhalogenated Biphenyls from Contaminated Soil, 643
Simultaneous Desulfurization and Denitrification by Microwave Catalytic over FeCoCu/Zeolite 5A Catalyst, 768

Middle East
The Burj Khalifa Triumphs: Reaching toward The Heavens, 2170
Construction Safety in Kuwait, 1502

Military engineering
Investigation of Laboratory Procedure for Evaluating Chemical Dust Palliative Performance, 1472
Load Configuration and Lateral Distribution of NATO Wheeled Military Trucks for Steel I-Girder Bridges, 165
MBTI Personality and Hemisphericity of a U.S. Air Force Group, 2072

Mine wastes
Improved Passive Treatment of Acid Mine Drainage in Mushroom Compost Amended with Crab-Shell Chitin, 683

Minerals
Stabilized Dredged Material. III: Mineralogical Perspective, 877

Mining
Adsorptive Removal of Parts per Million Level Selenate Using Iron-Coated GAC Adsorbents, 731
Calibration of Reactive Transport Models for Remediation of Mine Drainage in Solid-Substrate Biocolumns, 714
Case Study: Flood Mitigation of the Muda River, Malaysia, 969
Durability and Environmental Performance of Alkali-Activated Tungsten Mine Waste Mud Mortars, 1444
Evaluation and Remediation of an Abandoned Gypsum Mine, 835
Evaporation, Unsaturated Flow, and Salt Accumulation in Multilayer Deposits of "Paste" Gold Tailings, 939

Minnesota
Comparison of Block-Shear and Whitmore Section Methods for Load Rating Existing Steel Truss Gusset Plate Connections, 110

I-35W Bridge Collapse, 151
Roadway Lighting Shows Safety Benefits at Rural Intersections, 1891

Minority groups
Immigration and Construction: Analysis of the Impact of Immigration on Construction Project Costs, 1334

Missiles
Nonlinear Controller Synthesis for Single-Input Multiple-Output Systems with Application to Cruise Missile, 50

Mississippi River
Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045

Missouri
Promoting Sustainability through Transportation Infrastructure? Innovation and Inertia in the Kansas City Metropolitan Area, 1950

Mixing
Assessment of the Use of Hot-Mix Recycled Asphalt Concrete in Plant, 1913
Characterization of Fly Ash Bituminous Concrete Mixes, 1481
Design and Application of Risk Adjusted Cumulative Sum for Strength Monitoring of Ready Mixed Concrete, 376
Field Measurements of Mean Velocity Characteristics of a Large-Diameter Swirling Jet, 1007
Filling of a Flooded Gypsum Mine with a Flowable Soil-Cement Mix, 1411
Micromechanics of the Effects of Mixing Moisture on Foamed Asphalt Mix Properties, 1453
Understanding the Mixing Pattern in an Anaerobic Expanded Granular Sludge Bed Reactor: Effect of Liquid Recirculation, 678

Mixtures
Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509
Assessing Reliability and Potentiality of Nonnuclear Portable Devices for Asphalt Mixture Density Measurement, 1442
Characteristics of Rubber-Sand Particle Mixtures according to Size Ratio, 1376
Characterization of the Tensile Viscoelastic Properties of an Undamaged Asphalt Mixture, 1808
Coupled Micromechanical Model of Moisture-Induced Damage in Asphalt Mixtures, 1382
Determining Reliability of an Asphalt Mix Design: Case of Marshall Method, 1791
Development and Evaluation of the Hard-Grade Asphalt, 1432
Discrete Element Analysis of the Influences of Aggregate Properties and Internal Structure on Fracture in Asphalt Mixtures, 1341
Drainability of Permeable Friction Course Mixtures, 1403
Effect of Low-Density Polyethylene on Fracture Toughness of Asphalt Concrete Mixtures, 1457
Experimental Study on Flexural Testing of Compacted Soil Beams, 1392
Field Verification of Superpave Dynamic Modulus, 1395
Investigation of the Curing Mechanism of Foamed Asphalt Mixes Based on Micromechanics Principles, 1343
Investigation of the Use of Lightweight Aggregate Hot-Mixed Asphalt in Flexible Pavements in Frost Susceptible Areas, 1358
Morphology of Asphalt Mixture Rheological Master Curves, 1433
Parameter Identification Procedure for Heterogeneous Viscoelastic Composites Using Iterative Functions, 541
Percolation Threshold of Sand-Clay Binary Mixtures, 804
Postprocessing Method for Dynamic Modulus Tests of Hot-Mix Asphalt, 1415
Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410
Research on High- and Low-Temperature Properties of Asphalt-Mineral Filler Mastic, 1434
Stone-on-Stone Contact of Permeable Friction Course Mixtures, 1470
Triaxial Frequency Sweep Characterization of Asphalt-Aggregate Adhesion in Saskatchewan Asphaltic Mixes, 1806
Using Flotation to Separate Oil Spill Contaminated Beach Sands, 625

Modal analysis
Combined Experimental-Operational Modal Testing of Footbridges, 527
Dynamic Behavior of Stay Cables with Rotational Dampers, 528
Finite-Element Analysis and Vibration Testing of a Two-Span Masonry Arch Bridge, 1499
Frequency Spectrum Analysis of Impact-Echo Waveforms for T-Beams, 161
Identification and Monitoring of Modal Parameters in Aircraft Structures Using the Natural Excitation Technique (NExT) Combined with the Eigensystem Realization Algorithm (ERA), 49
New Dynamic Participation Factor for Turbine-Generator Foundations, 2135
Vibration Serviceability of a Building Floor Structure. I: Dynamic Testing and Computer Modeling, 1546

Model studies
Hydrological Effects of Bounding the Venice (Italy) Industrial Harbor by a Protection Cutoff Wall: Modeling Study, 1144
Influence of Relative Density of Soil on Performance of Geocell-Reinforced Sand Foundations, 1400

Model tests
Physical Modeling of Lateral Clay-Pipe Interaction, 867

Model verification
Efficient Model Correction Method with Modal Measurement, 468
Field Studies of Discoloration in Water Distribution Systems: Model Verification and Practical Implications, 618
Sensitivity of Shallow Foundation Response to Model Input Parameters, 827
Shear Strength of Large Concrete Members with FRP Reinforcement, 240

Models

Behavior and Modeling of Confined High-Strength Concrete, 201

Behavior of Bidirectional Spring Unit in Isolated Floor Systems, 1700

Below-Average Bidding Method, 408

Bridge Scour: Prediction, Modeling, Monitoring, and Countermeasures—Review, 2142

Calibration of Reactive Transport Models for Remediation of Mine Drainage in Solid-Substrate Biocolumns, 714

Development of a Kinetic Model for the Biosorption of Cationic Dyes by Dead Macrofungi, 667

Development of Nonlinear Railway Track Model Applying Modified Plane Strain Technique, 1903

Education for Sustainable Development and Civil Engineering for Children: Interactive Model Case Study, 1598

Efficacy of Using Support Vector Machine in a Contractor Prequalification Decision Model, 286

Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783

Extended Fourth-Order Depth-Integrated Model for Water Waves and Currents Generated by Submarine Landslides, 510

Feature Selection Using Stochastic Search: An Application to System Identification, 262

Field Verification of Superpave Dynamic Modulus, 1395

Influence of Rocking Motion on Vibratory Roller-Based Measurement of Soil Stiffness, 546

Integrated Schedule and Cost Model for Repetitive Construction Process, 1325

Integrated Simulation System for Construction Operation and Project Scheduling, 313

Kinetics of Arsenite Oxidation by Chemoautotrophic *Thiomonas arsenivorans* Strain b6 in a Continuous Stirred Tank Reactor, 735

Large Membrane Roof Analysis: Nonlinear Modeling of Structures, Connectors, and Experimental Evidences, 93

Model Development and Validation for Intelligent Data Collection for Lateral Spread Displacements, 304

Modeling Destination Choice Behavior Incorporating Spatial Factors, Individual Sociodemographics, and Travel Mode, 1874

Modeling Particle-Size Distribution Dynamics during Precipitative Softening, 610

Modeling Radar Rainfall Estimation Uncertainties: Random Error Model, 1084

Modeling the Heterogeneity in Contractors' Mark-Up Behavior, 386

Modeling the Oxidation of Sulfide in Pulp and Paper Wastewaters, 741

Modeling the Relationship between Capillary Suction Time and Specific Resistance to Filtration, 720

Modified Schapery's Model for Asphalt Sand, 503

Nonuniform and Unsteady Solute Transport in Furrow Irrigation. I: Model Development, 1241

Parameter Estimation for Nonlinear Muskingum Model Based on Immune Clonal Selection Algorithm, 1140

Parsimonious Model for Combined Sewer Overflow Pollution, 646

Pavements and Materials, 2266

Population and Initial Validation of a Formal Model for Construction Safety Risk Management, 412

Quantification of Spatial Temporal Congestion in Four-Dimensional Computer-Aided Design, 378

Research Validation: Challenges and Opportunities in the Construction Domain, 327

Simple Model for the Cyclic Behavior of Smooth Sand-Steel Interfaces, 874

Site Characterization Model Using Artificial Neural Network and Kriging, 30

State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181

Statistical Modeling of the Monthly Palmer Drought Severity Index, 1135

Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531

Transformation of the Sandler and Rubin Nonsmooth Cap Model to the Pelessone Smooth Cap Model, 526

Travel Demand Model for Beijing 2008 Olympic Games, 1845

Unified Strength Model Based on Hoek-Brown Failure Criterion for Circular and Square Concrete Columns Confined by FRP, 193

Moisture

Below-Ground Performance of Rigid Polystyrene Foam Insulation: Review of Effective Thermal Resistivity Values Used in ASCE Standard 32-01—Design and Construction of Frost-Protected Shallow Foundations, 170

Coupled Micromechanical Model of Moisture-Induced Damage in Asphalt Mixtures, 1382

Dynamic Numerical Analysis of Antimoisture-Damage Mechanism of Permeable Pavement Base, 36

Experimental Investigation of the Influence of Moisture on the Bond Behavior of FRP to Concrete Interfaces, 258

Experimental Study on Moisture Migration in Unsaturated Loess under Effect of Temperature, 172

Influence of Antistripping Additives on Moisture Susceptibility of Warm Mix Asphalt Mixtures, 1461

Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages, 1371

Interactions of Granite and Asphalt Based on the Rheological Characteristics, 1435

Inverse Method for Estimating the Spatial Variability of Soil Particle Size Distribution from Observed Soil Moisture, 1149

Laboratory Evaluation of Moisture Susceptibility of Hot-Mix Asphalt Containing Cementitious Fillers, 1416

Micromechanics of the Effects of Mixing Moisture on Foamed Asphalt Mix Properties, 1453

Nanoscale Evaluation of Moisture Damage in Polymer Modified Asphalts, 1421

New Parameter to Evaluate Moisture Damage of Asphalt-Aggregate Bond in Using Dynamic Shear Rheometer, 1370

Nondestructive Investigation of Wet Building Material: Multimethodical Approach, 1543

Nondestructive Testing Evaluation of Drying Process in Flooded Full-Scale Masonry Walls, 1544

Sensitivity of Untreated Reclaimed Asphalt Pavement to Moisture, Density, and Freeze Thaw, 1487

Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220

Moment distribution
Analysis of Moment Redistribution in Fiber-Reinforced Polymer Plated RC Beams, 219
Flexural Behavior of Continuous FRP-Reinforced Concrete Beams, 243
Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105
Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626
Regional Bivariate Frequency Analysis of Meteorological Droughts, 1154

Monitoring
Bridge Scour: Prediction, Modeling, Monitoring, and Countermeasures—Review, 2142
Characterization of Wireless Smart Sensor Performance, 601
Characterizing Physicochemical Quality of Storm-Water Runoff from an Urban Area in Calgary, Alberta, 745
Computer Vision-Based Video Interpretation Model for Automated Productivity Analysis of Construction Operations, 284
Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706
Densimetric Monitoring Technique for Suspended-Sediment Concentrations, 949
Design and Application of Risk Adjusted Cumulative Sum for Strength Monitoring of Ready Mixed Concrete, 376
Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578
Detection of Vehicles with Studded Tires Using Acoustic Emission Sensors Mounted to Highway Bridges, 1839
Effective Monitoring of the Concrete Pouring Operation in an RFID-Based Environment, 272
Embankments over Soft Clay Deposits: Contribution of Basal Reinforcement and Surface Sand Layer to Stability, 799
Evaluation of Storm-Water Wetlands in Series in Piedmont North Carolina, 624
Evaluation of Vibration Assessment Criteria and Their Application to Stadium Serviceability, 1505
Explanation for Anomalous Readings during Monitoring of a Best Management Practice, 1258
Extended Receiver Autonomous Integrity Monitoring (eRAIM) for GNSS/INS Integration, 1767
Field Monitoring and Repair of a Glass Fiber-Reinforced Polymer Bridge Deck, 1516
Guideline for Monitoring Stormwater Gross Solids, 2252
Hybrid Control Charts for Active Control and Monitoring of Concrete Strength, 1348
Identification and Monitoring of Modal Parameters in Aircraft Structures Using the Natural Excitation Technique (NExT) Combined with the Eigensystem Realization Algorithm (ERA), 49
In Situ Microscale Analyses of Activated Sludge Flocs in the Enhanced Biological Phosphate Removal Process by the Use of Microelectrodes and Fluorescent In Situ Hybridization, 676
Inclusion of Crawl Tests and Long-Term Health Monitoring in Bridge Serviceability Analysis, 124
In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study, 150
Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida, 1976
Load Vectors for Damage Location in Systems Identified from Operational Loads, 462
Logic-Based Design of Groundwater Monitoring Network for Redundancy Reduction, 1967
Long-Term Wireless Structural Health Monitoring of the Ferriby Road Bridge, 109
Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510
Modified Cross-Correlation Method for the Blind Identification of Structures, 545
Monitoring and Modeling Grout Efficiency of Lifting Structure in Soft Clay, 35
Monitoring Design for Source Identification in Water Distribution Systems, 2024
Monitoring Suspended Sediment Dynamics Using MBES, 945
Monitoring System to Provide Assurance for Maintenance of Structures, 2128
Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759
Multimodel Structural Performance Monitoring, 1736
Multivariate Statistical Approach to Structural Damage Detection, 460
New Insights into the Quality of Urban Storm Water in South Eastern Australia, 654
Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224
Parametric Estimation for RC Flexural Members Based on Distributed Long-Gauge Fiber Optic Sensors, 1620
Quantifying Biomediated Ground Improvement by Ureolysis: Large-Scale Biogrout Experiment, 941
Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572
Revisiting the Strengths and Limitations of Regulatory Contracts in Infrastructure Industries, 1197
Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623
Sensor Network for Structural Health Monitoring of a Highway Bridge, 263
Terrestrial Laser Scanning for Monitoring Streambank Retreat: Comparison with Traditional Surveying Techniques, 1023
Tracking Error-Based Servohydraulic Actuator Adaptive Compensation for Real-Time Hybrid Simulation, 1651
Using Filtered and Semicontinuous High Rate GPS for Monitoring Deformations, 1775

Montana
Car-Following Interaction and the Definition of Free-Moving Vehicles on Two-Lane Rural Highways, 1888

Monte Carlo method
Aerostatic Reliability Analysis of Long-Span Bridges, 119
Analysis of Regulatory Guidance Values for Residential Surface Soil Arsenic Exposure, 709
Modeling Spatially Unrestricted Pedestrian Traffic on Footbridges, 1735

Monte–Carlo Based Method for Predicting Extreme Value Statistics of Uncertain Structures, 605

Nearest Neighbor Probabilistic Model for Aluminum Polycrystals, 538

Observations on Limit Equilibrium–Based Slope Reliability Problems with Inclined Weak Seams, 581

Probabilistic Approach to Estimation of Urban Storm-Water TMDLs: Regulated Catchment, 1270

Probabilistic Assessment of Slope Stability That Considers the Spatial Variability of Soil Properties, 870

Probability of Failure Analysis due to Internal Corrosion in Cast-Iron Pipes, 1170

Quantitative Methods for Design-Build Team Selection, 405

Reliability-Constrained Optimization of Water Treatment Plant Design Using Genetic Algorithm, 647

Safety Assessment of a Steel Frame Using LRFD and SBRA Methods, 2136

Stochastic Dilemma Hazard Model at High-Speed Signalized Intersections, 1835

Stochastic Free Vibration Response of Soft Core Sandwich Plates Using an Improved Higher-Order Zigzag Theory, 40

Structural Reliability Estimation with Vibration-Based Identified Parameters, 469

Toward Monte Carlo Simulation-Based Mechanistic-Empirical Prediction of Asphalt Pavement Performance, 1860

Moon

Discrete Element Modeling of Strength Properties of Johnson Space Center (JSC-1A) Lunar Regolith Simulant, 57

Engineering Properties of Lunar Soil Simulant JSC-1A, 46

Geotechnical Properties of JSC-1A Lunar Soil Simulant, 51

Geotechnical Properties of NT-LHT-2M Lunar Highland Simulant, 63

Some Comments on the Protection of Lunar Habitats against Damage from Meteoroid Impacts, 48

Mooring

Mechanics of Drag Embedment Anchors in a Soft Seabed, 780

Passive Restraint System for Floating Docks with Large Water-Level Excursions, 2159

Morphology

3D Calculations of Equilibrium Conditions in Loose-Bed Open Channels with Significant Suspended Sediment Load, 1000

Detection of Terrain Morphologic Features Using GPS, TLS, and Land Surveys: "Tana della Volpe" Blind Valley Case Study, 1782

Hydraulic Geometry Relations for Stable Channel Design, 1142

Morphology of Asphalt Mixture Rheological Master Curves, 1433

Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004

Mortars

Assessment of Mortar and Brick Strength in Earthquake-Affected Structures in Peru Using a Schmidt Hammer, 1560

Durability and Environmental Performance of Alkali-Activated Tungsten Mine Waste Mud Mortars, 1444

Effect of Temperature on the Setting Behavior of Concrete, 1363

Experimental and Numerical Quantification of Plastic Settlement in Fresh Cementitious Systems, 1450

Investigations on Pastes and Mortars of Ordinary Portland Cement Admixed with Wollastonite and Microsilica, 1374

Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420

Nondeformability of Ventilated and Mortar-Embedded Marble Facade Panels, 1496

Proportioning Design and Mechanical Properties Research of Polypropylene Fiber and Polymer Emulsion Reinforced Cement Mortar, 1364

Recycled Red-Clay Ceramic Construction and Demolition Waste for Mortars Production, 1366

Static and Cyclic Out-of-Plane Response of Masonry Walls Strengthened Using Textile-Mortar System, 1475

Strength and Carbonation Model of Rice Husk Ash Cement Mortar with Different Fineness, 1368

Structural Upgrade Using Basalt Fibers for Concrete Confinement, 231

Mountains

Flood Modeling in the Coastal Plains and Mountains: Analysis of Terrain Resolution, 2079

Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053

Mastering a Mountain, 2223

Movable bed models

Sediment Transport on Arbitrary Slopes: Simplified Model, 974

Moving loads

Dynamic Response Solution in Transient State of Viscoelastic Road under Moving Load and Its Application, 475

Mud

Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913

Mean Velocity of Mudflows and Debris Flows, 1012

Treatment of Drilling Wastewater by Combined Coagulation-Ultraviolet/Fenton-Pressurized Biological Processes, 641

Multiple objective analysis

Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316

Multiple purpose structures

Thermomechanical Behavior of Multifunctional GFRP Sandwich Structures with Encapsulated Photovoltaic Cells, 224

Municipal engineering

Practical Melting Forecasting of Artificial Snow Made from Treated Wastewater, 173

Municipal wastes

Compaction Characteristics of Municipal Solid Waste, 882

Development of a Practical Method for the Estimation of Maximum Lateral Displacement in Large Landfills, 2099

Dual-Interval Fuzzy Stochastic Programming Method for Long-Term Planning of Municipal Solid Waste Management, 279

Geotechnical Characterization Field Measurement, and Laboratory Testing of Municipal Solid Waste, 2248
Life-Cycle Assessment of Waste Management Greenhouse Gas Emissions Using Municipal Waste Combustor Data, 697
Physical Characterization of Municipal Solid Waste for Geotechnical Purposes, 895
Secondary Compression of Municipal Solid Wastes and a Compression Model for Predicting Settlement of Municipal Solid Waste Landfills, 843
Shear Strength of Municipal Solid Waste, 10
Simultaneous Organic and Nutrient Removal in a Naturally Ventilated Biotower Treating Presettled Municipal Wastewater, 644
Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704
Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

Municipal water
AC Pipe in North America: Inventory, Breakage, and Working Environments, 1581
Comparison of Multivariate Regression and Artificial Neural Networks for Peak Urban Water-Demand Forecasting: Evaluation of Different ANN Learning Algorithms, 1130
Seasonal Residential Water Demand Forecasting for Census Tracts, 1961

Nails
Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689
Wood Materials, Nails, and Sheathing Connections from Early 20th Century Residential Buildings, 1469

Nanotechnology
Adsorption Mechanism of Arsenate on Crystal γ-Fe_2O_3 Nanoparticles, 712
Characterization of Organic Surfactant on Montmorillonite Nanoclay to Be Used in Bitumen, 1431
Determining Hardness and Elastic Modulus of Asphalt by Nanoindentation, 22
Dynamic Instability of Nanorods/Nanotubes Subjected to an End Follower Force, 563
Effect of Various Organomodified Montmorillonites on the Properties of Montmorillonite/Bitumen Nanocomposites, 1430
Femtotechnology: Design of the Strongest AB Matter for Aerospace, 69
Natural Organic Matter Removal by Adsorption onto Carbonaceous Nanoparticles and Coagulation, 729

Natural disasters
Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095
Estimating the Social and Economic Consequences of Natural Hazards: Fiscal Impact Example, 2083
Improving Flood Insurance and Flood-Risk Management: Insights from St. Louis, Missouri, 2094
Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086
Maximizing Temporary Housing Safety after Natural Disasters, 1177
Multidisciplinary Assessment of Critical Facility Response to Natural Disasters, 2264
Optimizing Resource Utilization during the Recovery of Civil Infrastructure Systems, 1339
Wind Storm and Storm Surge Mitigation, 2295

Natural frequency
Dynamic Properties of Lightweight Concrete Beams Made by Sedimentary Lightweight Aggregate, 1408
Effect of Bracing on Linear Free Vibration Characteristics of Thin-Walled Beams with Open Cross Section, 487
Reconstruction Method for Damage Detection in Beams Based on Natural Frequency and Antiresonant Frequency Measurements, 492
Stochastic Free Vibration Response of Soft Core Sandwich Plates Using an Improved Higher-Order Zigzag Theory, 40
Vibration Performance of Lightweight Cold-Formed Steel Floors, 1671

Natural gas
Energy Conservation Opportunities in an Industrial Boiler System, 449

Navigation
Incorporation of Air Emissions in Dredging Method Selection, 2046
Relative Circular Navigation Guidance for Three-Dimensional Impact Angle Control Problem, 71

Nearshore
Identification of Nearshore Wave Characteristics Using Robotic Total Stations, 1787
Model of Nearshore Waves and Wave-Induced Currents around a Detached Breakwater, 2044
Validation of Two Wave and Nearshore Current Models, 2032

Nebraska
Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills, 1064
Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills
Quality Control of Soil Water Data in Applied Climate Information System—Case Study in Nebraska, 1076

Negligence
Is Construction Blasting Still Abnormally Dangerous?, 1311

Negotiations
Attitude-Based Negotiation Methodology for the Management of Construction Disputes, 1328
Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309
Considering Attitudes in Strategic Negotiation over Brownfield Disputes, 1315
Judging Unreasonable Litigation Behavior at the Interface of Mediation in the English Jurisdiction, 1306

Netherlands
Archetype, 2168
Management of Redeveloped Industrial Areas with Mixed Use in The Netherlands, 1300

Network analysis
Assessing Pressure Changes in an On-Demand Water Distribution System on Drip Irrigation Performance—Case Study in Italy, 1229
Considering Actual Pipe Connections in Water Distribution Network Analysis, 1035

Networks
Autogeneration of Simulation Network of the Design Process, 303
Integrating Location Models with Bayesian Analysis to Inform Decision Making, 1980

Median-Based Estimates and Their Application in Controlling Reference Mark Stability, 1772

Neural networks

Artificial Intelligence Techniques as Detection Tests for the Identification of Shifts in Hydrometric Data, 298

Artificial Neural Network Model for Cost Estimation: City of Edmonton's Water and Sewer Installation Services, 388

Artificial Neural Network Model of Bridge Deterioration, 1556

Comparative Study of SVMs and ANNs in Aquifer Water Level Prediction, 299

Comparing Sigmoid Transfer Functions for Neural Network Multistep Ahead Streamflow Forecasting, 1085

Comparison of Multivariate Regression and Artificial Neural Networks for Peak Urban Water-Demand Forecasting: Evaluation of Different ANN Learning Algorithms, 1130

Cost Estimating Models for Utility Rehabilitation Projects: Neural Networks versus Regression, 1574

Development and Verification of an Online Artificial Intelligence System for Detection of Bursts and Other Abnormal Flows, 1990

Evapotranspiration Modeling Using Linear Genetic Programming Technique, 1278

Fuzzy Genetic Approach for Modeling Reference Evapotranspiration, 1219

Generalization of ET_o ANN Models through Data Supplanting, 1218

Genetic Programming to Predict Bridge Pier Scour, 958

Genetic Programming to Predict River Pipeline Scour, 1577

Global Optimization of Pavement Structural Parameters during Back-Calculation Using Hybrid Shuffled Complex Evolution Algorithm, 302

Groundwater Level Prediction Using SOM-RBFN Multisite Model, 1117

Hydraulic Deterioration Models for Storm-Water Drainage Pipes: Ordered Probit versus Probabilistic Neural Network, 275

Infilling Missing Daily Evapotranspiration Data Using Neural Networks, 1235

Innovative ANN Technique for Predicting Failure/Cracking Load of Masonry Wall Panel under Lateral Load, 296

Integrated Emitter Local Loss Prediction Using Artificial Neural Networks, 1200

Interbasin Water Transfer: Economic Water Quality-Based Model, 1209

Kernel-Based Machine Learning Models for Predicting Daily Truck Volume at Seaport Terminals, 1911

Markov and Neural Network Models for Prediction of Structural Deterioration of Storm-Water Pipe Assets, 1180

Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510

Modeling the Time Variation of Reservoir Trap Efficiency, 1155

Multiobjective Water Quality Model Calibration Using a Hybrid Genetic Algorithm and Neural Network–Based Approach, 724

Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties, 12

Neural Network–Swarm Intelligence Hybrid Nonlinear Optimization Algorithm for Pavement Moduli Back-Calculation, 1844

Optimal Operation of Complex Water Distribution Systems Using Metamodels, 2002

Predicting the Outcome of Construction Litigation Using an Integrated Artificial Intelligence Model, 269

Radial Basis Function Neural Network Models for Peak Stress and Strain in Plain Concrete under Triaxial Stress, 1447

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978

Site Characterization Model Using Artificial Neural Network and Kriging, 30

Soil Moisture Profile Development from Surface Observations by Principle of Maximum Entropy, 1089

Structural Condition Assessment of Sewer Pipelines, 1512

Techniques for Predicting Cracking Pattern of Masonry Wallet Using Artificial Neural Networks and Cellular Automata, 277

Using Soft Computing to Analyze Inspection Results for Bridge Evaluation and Management, 135

Nevada

Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629

A Glittering Center, 2198

Hoover Dam, 2256

New Mexico

Case Study: Movable Bed Model Scaling for Bed Load Sediment Exclusion at Intake Structure on Rio Grande, 968

Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088

Infilling Missing Daily Evapotranspiration Data Using Neural Networks, 1235

Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704

New York

Deterioration Rates of Typical Bridge Elements in New York, 134

Emphasis on Expansion, 2206

Optimization of Water Distribution Network Design Using Differential Evolution, 1987

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. I: Bridge Modeling, Parametric Analysis, and Retrofit Design, 137

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. II: Fragility Analysis, Fragility Curves, and Fragility Surfaces, 138

Under Control, 2214

Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

New York City

Emphasis on Expansion, 2206

Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

New Zealand
Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095
Using Recycled Concrete Aggregates in New Zealand Ready-Mix Concrete Production, 1390

Niagara River
Application of Hilbert-Huang Transform Method for Analyzing Toxic Concentrations in the Niagara River, 1066

Nigeria
Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry, 1582

Night time
Evaluation of the Visibility of Workers' Safety Garments during Nighttime Highway-Maintenance Operations, 1850

Nitrates
Distribution of the Microbial Community Structure in Sulfur-Based Autotrophic Denitrification Columns, 666
Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989

Nitrification
Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713
Performance of Nitrogen-Removing Bioretention Systems for Control of Agricultural Runoff, 733

Nitrogen
Effect of Carbon Source on Biological Nitrogen and Phosphorus Removal in an Anaerobic-Anoxic-Oxic (A^2O) Process, 749
New Insights into the Quality of Urban Storm Water in South Eastern Australia, 654
Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174
Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617
Side-by-Side Comparison of Nitrogen Species Removal for Four Types of Permeable Pavement and Standard Asphalt in Eastern North Carolina, 1107
Volumetric Filtration of Rainfall Runoff. II: Event-Based and Interevent Nutrient Fate, 760
Watershed-Scale Impacts of Nitrogen from On-Site Wastewater Systems: Parameter Sensitivity and Model Calibration, 715

Nonaqueous phase liquids
Model to Describe the Binodal Curve on a Type 1 Ternary Phase Diagram, 686

Nondestructive tests
Accuracy of Ground-Penetrating Radar for Concrete Pavement Thickness Measurement, 1558
Application of Results of Nondestructive Testing Methods in the Investigation of Microstructure of Refractory Concretes, 1439
Comparative Study of Static and Dynamic Falling Weight Deflectometer Back-Calculations Using Probabilistic Approach, 1811
Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578
Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502
Effect of Concrete Compositions in Energy Transmission of Surface Waves for Nondestructive Crack Depth Evaluation, 1425
Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128
Forensic Engineering 2009, 2245
Global Optimization of Pavement Structural Parameters during Back-Calculation Using Hybrid Shuffled Complex Evolution Algorithm, 302
Impact of Heterogeneity on Gamma-Spectrometry Data at Nondestructive Assay of Radioactive Waste, 2117
Indo-U.S. Forensic Practices, 2260
Influence of Surface Condition on the Inspection of Steel Bridge Elements Using the Time-of-Flight Diffraction Method, 157
Inspection and Condition Assessment Using Ground Penetrating Radar, 793
Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420
Nondestructive Investigation of Wet Building Material: Multimethodical Approach, 1543
Nondestructive Testing Evaluation of Drying Process in Flooded Full-Scale Masonry Walls, 1544
Nondestructive Testing of GFRP Bridge Decks Using Ground Penetrating Radar and Infrared Thermography, 131
Quality Assessment and Quality Control of Deep Soil Mixing Construction for Stabilizing Expansive Subsoils, 785
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176
Structural Analyses and Assessment of Historical Kamanlı Mosque in Izmir, Turkey, 1531
Terrestrial Laser Scanning-Based Structural Damage Assessment, 285

Nonlinear analysis
Analysis of Snap-Back Instability due to End-Plate Debonding in Strengthened Beams, 479
Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627
Finite-Element Model for Pretensioned Prestressed Concrete Girders, 1648
Geometrically Nonlinear Analysis of Plane Frames Subjected to Temperature Changes, 1739
Hysteresis Model of Thin Infill Plate for Cyclic Nonlinear Analysis of Steel Plate Shear Walls, 1746
Impact of Different Earthquake Types on the Statistics of Ductility Demand, 1684
Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames, 1655
Large Membrane Roof Analysis: Nonlinear Modeling of Structures, Connectors, and Experimental Evidences, 93
Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626
Nonlinear Analysis of Composite Beams with Partial Interaction in Steel Frame Structures at Elevated Temperature, 1703
Nonlinear Analysis of Masonry Arches Strengthened with Composite Materials, 557

Nonlinear Analysis of Torsionally Loaded Piles in a Two-Layer Soil Profile, 18

Nonlinear Finite-Element Analysis Software Architecture Using Object Composition, 271

Nonlinear Static Analysis of Structures with Rocking Columns, 1661

Nonlinear Thermoelastic Buckling of Pin-Ended Shallow Arches under Temperature Gradient, 553

Parallel Axial-Flexural Hinge Model for Nonlinear Dynamic Progressive Collapse Analysis of Welded Steel Moment Frames, 1623

Prediction of Extreme Response Statistics of Narrow-Band Random Vibrations, 488

Seismic Column Demands in Ductile Braced Frames, 2

Simplified Procedure for Seismic Evaluation of Piles with Partial-Moment Connection to the Deck in Marine Oil Terminals, 1660

Study of Buckling in Steel Silos under Eccentric Discharge Flows of Stored Solids, 534

Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

Nonlinear response

Aerostatic Reliability Analysis of Long-Span Bridges, 119

Modified Schapery's Model for Asphalt Sand, 503

Nonlinear Identification of Lumped-Mass Buildings Using Empirical Mode Decomposition and Incomplete Measurement, 486

Seismic Design of Flexible Cantilevered Retaining Walls, 807

Nonlinear systems

Genetic-Algorithm-Based Strategies for Dynamic Identification of Nonlinear Systems with Noise-Corrupted Response, 278

Improved Decentralized Method for Control of Building Structures under Seismic Excitation, 524

Modeling Nonlinear Systems by Volterra Series, 537

Nonlinear Controller Synthesis for Single-Input Multiple-Output Systems with Application to Cruise Missile, 50

Nonpoint pollution

Case Study of Distributed Hydrologic Model for Soil and Nutrient Loss Estimation in Small Watershed, 2102

Characterizing Physicochemical Quality of Storm-Water Runoff from an Urban Area in Calgary, Alberta, 745

Dual Discharge Approach to Accessing Assimilative Capacity: Probabilistic Analysis and Management Application, 688

Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088

Long-Term Simulation of a System for Catchment, Pretreatment, and Treatment of Polluted Runoff Water, 773

New Approach to Evaluate Pollutant Removal by Storm-Water Treatment Devices, 653

Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103

Nonstructural elements

Earthquake Simulator Testing and Seismic Evaluation of Suspended Ceilings, 82

North America

AC Pipe in North America: Inventory, Breakage, and Working Environments, 1581

Bridge Inspection Practice: Two Different North American Railways, 136

Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751

North Carolina

Assessment of Link Reliability as a Function of Congestion Components, 1886

Effect of Storm-Water Wetlands and Wet Ponds on Runoff Temperature in Trout Sensitive Waters, 1273

Impact of Storm-Water Runoff on Clogging and Fecal Bacteria Reduction in Sand Columns, 772

Runoff Volume Reduction by a Level Spreader–Vegetated Filter Strip System in Suburban Charlotte, N.C., 1105

Side-by-Side Comparison of Nitrogen Species Removal for Four Types of Permeable Pavement and Standard Asphalt in Eastern North Carolina, 1107

Valuing Drinking Water Provision as an Ecosystem Service in the Neuse River Basin, 2006

North Dakota

Identifying Critical Sources of Bridge Deterioration in Cold Regions through the Constructed Bridges in North Dakota, 146

Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086

Norway

Asset Management for Urban Wastewater Pipeline Networks, 1174

Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994

Numerical analysis

Comparative Study of Static and Dynamic Falling Weight Deflectometer Back-Calculations Using Probabilistic Approach, 1811

Development and Validation of a Two-Phase Model for Reinforced Soil by Considering Nonlinear Behavior of Matrix, 530

Dynamic Analysis of a Composite Cable-Stayed Bridge: Escaleritas Viaduct, 156

Dynamic Numerical Analysis of Antimoisture-Damage Mechanism of Permeable Pavement Base, 36

Effectiveness of Viscoelastic Models for Prediction of Tensile Axial Strains during Cyclic Loading of High-Density Polyethylene Pipe, 1570

Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536

Free Vibration Analysis of Cylindrical Shells Supported on Parts of the Edges, 42

Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

Monitoring and Modeling Grout Efficiency of Lifting Structure in Soft Clay, 35

Morphology and Substrate Control on the Dynamics of Flowlike Landslides, 810

Numerical Study of the Effect of Verification Core Hole on the Point Bearing Capacity of Drilled Shafts, 900

One-Dimensional Study on Propagation of Tsunami Wave in River Channels, 950

Parameter Identification Procedure for Heterogeneous Viscoelastic Composites Using Iterative Functions, 541
Plane-Strain Propagation of a Fluid-Driven Crack in a Permeable Rock with Fracture Toughness, 574
Seismic Design of Flexible Cantilevered Retaining Walls, 807
Undrained Lateral Pile Response in Sloping Ground, 918
Verification of Nondimensional Energy Spectrum-Based Blast Design for Reinforced Concrete Members through Actual Blast Tests, 1669

Numerical models

Advances in Modeling Completely Mixed Flow Reactors for Ion Exchange, 736
Analytical and Numerical Models of Postbuckling of Orthotropic Symmetric Plates, 589
Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051
Behavior of an Atypical Embankment on Soft Soil: Field Observations and Numerical Simulation, 778
Coherent Structure Dynamics in Turbulent Flows Past In-Stream Structures: Some Insights Gained via Numerical Simulation, 1046
Comparison between Models of Rock Discontinuity Strength and Deformation, 858
Coupled 1D–Quasi-2D Flood Inundation Model with Unstructured Grids, 994
Coupled Micromechanical Model of Moisture-Induced Damage in Asphalt Mixtures, 1382
Design Charts for Evaluating Impact Forces on Dissipative Granular Soil Cushions, 922
Dynamic Simulation of the Maglev Vehicle/Guideway System, 120
Flow Pattern for a Silo with Two Layers of Materials with Single or Double Openings, 899
Head Reconstruction Method to Balance Flux and Source Terms in Shallow Water Equations, 511
Implementation and Application of a New Elastoplastic Model Based on a Multiaxial Criterion to Assess the Stress State near Underground Openings, 13
Influence of Nonlinearity on the Stress Distribution in the Soil—Application to Road Engineering Problems, 1797
Influence of Vertical Resolution and Nonequilibrium Model on Three-Dimensional Calculations of Flow and Sediment Transport, 953
Installation and Axial Pullout of Suction Caissons: Numerical Modeling, 886
Lattice Boltzmann Model for the Simulation of Flows in Open Channels with Application to Flows in a Submerged Sluice Gate, 1288
Modeling of Rainfall-Induced Shallow Landslides of the Flow-Type, 782
Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231
Modeling Unsteady Flow Characteristics of Hydropeaking Operations and Their Implications on Fish Habitat, 1052
Modeling Water Table Mounding and Contaminant Transport beneath Storm-Water Infiltration Basins, 1152
New Approach for Predicting Flow Bifurcation at Right-Angled Open-Channel Junction, 1010
Numerical Model for Tracing the Response of FRP-Strengthened RC Beams Exposed to Fire, 248
Numerical Modeling for Hydraulic Resonance in Hydropower Systems Using Impulse Response, 1039
Numerical Modeling of Concrete-FRP Debonding Using a Crack Band Approach, 178
Numerical Modeling of Geofoam Embankments, 802
Numerical Modeling of River Flow for Ecohydraulic Applications: Some Experiences with Velocity Characterization in Field and Simulated Data, 1050
Numerical Simulation of Viscoelastoplastic Land Subsidence due to Groundwater Overdrafting in Shanghai, China, 1079
Quantitative Structural Health Monitoring by Ultrasonic Guided Waves, 551
Reduction-Based Model Updating of a Scaled Offshore Platform Structure, 472
Scour and Erosion (GSP 210), 2276
Seismic Behavior of Batter Piles: Elastic Response, 891
Seismic Earth Pressures on Cantilever Retaining Structures, 903
Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size, 771
Shear Capacity of the Flange-Web Intersections of Brick Masonry Nonrectangular Sections, 1665
Simplified Method for the Characterization of the Hydrograph following a Sudden Partial Dam Break, 1014
Size Effects for Reinforced Concrete Beams Strengthened in Shear with CFRP Strips, 202
Three-Dimensional Seismic Response of a Full-Scale Light-Frame Wood Building: Numerical Study, 1611
Transport Characteristics in a 3D Groundwater Circulation Flow Field by Experimental and Numerical Investigations, 2115
Two-Dimensional LDV Measurement, Modeling, and Optimal Design of Rectangular Primary Settling Tanks, 669
Validation of Two Wave and Nearshore Current Models, 2032
Wave Overtopping and Damage Progression of Stone Armor Layer, 2052

Nutrient loads

Predictive Modeling of Transient Storage and Nutrient Uptake: Implications for Stream Restoration, 1049

Nutrients

Case Study of Distributed Hydrologic Model for Soil and Nutrient Loss Estimation in Small Watershed, 2102
Comparison of the Monod and Droop Methods for Dynamic Water Quality Simulations, 723
Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713
Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617
Simultaneous Organic and Nutrient Removal in a Naturally Ventilated Biotower Treating Presettled Municipal Wastewater, 644

Occupational health

Case Study to Identify Barriers and Incentives to Implementing an Engineering Control for Concrete Grinding Dust, 437
Health and Safety Management within Small- and Medium-Sized Enterprises (SMEs) in Developing Countries: Study of Contextual Influences, 424

Impacts of Stressors and Stress on the Injury Incidents of Construction Workers in Hong Kong, 423

Occupational safety

Health and Safety Management within Small- and Medium-Sized Enterprises (SMEs) in Developing Countries: Study of Contextual Influences, 424

Impacts of Stressors and Stress on the Injury Incidents of Construction Workers in Hong Kong, 423

Population and Initial Validation of a Formal Model for Construction Safety Risk Management, 412

Ocean waves

Infragravity Wave Motions and Runup over Shallow Fringing Reefs, 2056

Oceans

Clustering Time Series of Sea Levels: Extreme Value Approach, 2048

Influence of Physical Forcing on Bottom-Water Dissolved Oxygen within Caloosahatchee River Estuary, Florida, 725

Odors

Tire-Derived Steel for Hydrogen Sulfide Removal in Landfill Cover, 2118

Offshore construction

Offshore Technology in Civil Engineering, 2265

Offshore drilling

Offshore Technology in Civil Engineering, 2265

Offshore structures

Analysis of Soil Strength Degradation during Episodes of Cyclic Loading, Illustrated by the T-Bar Penetration Test, 23

Consolidation beneath Circular Skirted Foundations, 14

Mechanics of Drag Embedment Anchors in a Soft Seabed, 780

Offshore Technology in Civil Engineering, 2265

Reduction-Based Model Updating of a Scaled Offshore Platform Structure, 472

Supporting the Winds of Change, 2205

Undrained Capacity of Plate Anchors under General Loading, 908

Ohio

Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628

Headworks and Headway, 2161

Multicriteria Decision-Making Approach for Highway Slope Hazard Management, 1167

Oil spills

Using Flotation to Separate Oil Spill Contaminated Beach Sands, 625

Oils

Mathematical Model for the Sequestering of Chemical Contaminants by Magnetic Particles, 750

Oman

Causes, Effects, Benefits, and Remedies of Change Orders on Public Construction Projects in Oman, 375

Open channel flow

Application of Riprap and Collar to Prevent Scouring around Rectangular Bridge Piers, 962

Closed-Form Expression of the Response Time of an Open Channel, 1274

Critical Depth Relationships in Developing Open-Channel Flow, 960

Depth-Averaged Shear Stress and Velocity in Open-Channel Flows, 1043

Draining the Tangjiashan Barrier Lake, 1037

Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268

Estimation of Power Spectra of Acoustic-Doppler Velocimetry Data Contaminated with Intermittent Spikes, 982

Estimation of the Washout Depth of Fine Sediments from a Granular Bed, 1022

Influence of Relative Roughness and Reynolds Number on the Roll-Waves Spatial Evolution, 943

Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition, 956

Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition

Junction and Drop-Shaft Boundary Conditions for Modeling Free-Surface, Pressurized, and Mixed Free-Surface Pressurized Transient Flows, 1015

Laboratory Measurements on Turbulent Pressure Fluctuations in and above Gravel Beds, 1021

Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136

Modeling Unsteady Open-Channel Flow for Controller Design, 1243

Near-Transducer Errors in ADCP Measurements: Experimental Findings, 971

New Approach for Predicting Flow Bifurcation at Right-Angled Open-Channel Junction, 1010

Subcritical Contraction for Improved Open-Channel Flow Measurement Accuracy with an Upward-Looking ADVM, 1269

Temporal Scales for Live-Bed Scour at Abutments, 985

Turbulence Characteristics in Flows Subjected to Boundary Injection and Suction, 544

Two-Dimensional Depth-Averaged Flow Modeling with an Unstructured Hybrid Mesh, 942

Velocity Profile and Flow Resistance Models for Developing Chute Flow, 989

Open channels

3D Calculations of Equilibrium Conditions in Loose-Bed Open Channels with Significant Suspended Sediment Load, 1000

Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003

Channel Bed Slope Effect on the Height of Gravity Waves Produced by a Sudden Downstream Discharge Stoppage, 976

Estimation of Friction Factor in Open Channels, 1082

Hydraulic Relations for Clinging Flow of Sharp-Crested Weir, 984

Iterative Formulas and Estimation Formulas for Computing Normal Depth of Horseshoe Cross-Section Tunnel, 1286

Lattice Boltzmann Model for the Simulation of Flows in Open Channels with Application to Flows in a Submerged Sluice Gate, 1288

Monitoring Suspended Sediment Dynamics Using MBES, 945

Real-Time Implementation of Model Predictive Control on Maricopa-Stanfield Irrigation and Drainage District's WM Canal, 1281

Supervised Gain-Scheduling Multimodel versus Linear Parameter Varying Internal Model Control of Open-Channel Systems for Large Operating Conditions, 1260

Transient Hydrodynamic Dispersion in Rough Open Channels: Theoretical Analysis of Bed-Form Effects, 957

Two-Dimensional Simulation of Subcritical Flow at a Combining Junction: Luxury or Necessity?, 1024

Openings

Flow Pattern for a Silo with Two Layers of Materials with Single or Double Openings, 899

Implementation and Application of a New Elastoplastic Model Based on a Multiaxial Criterion to Assess the Stress State near Underground Openings, 13

Optimization

Accounting for Greenhouse Gas Emissions in Multiobjective Genetic Algorithm Optimization of Water Distribution Systems, 1974

Adaptive Harmony Search Method for Structural Optimization, 1650

Analysis and Synthesis of Transmission Loss Hydrographs, 1271

Application of a SOM-Based Optimization Algorithm in Minimizing Construction Time for Secant Pile Wall, 432

Attitude-Based Negotiation Methodology for the Management of Construction Disputes, 1328

Calibration and Optimization of the Pumping and Disinfection of a Real Water Supply System, 2008

Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923

Case Studies of Leak Detection and Location in Water Pipe Systems by Inverse Transient Analysis, 1984

Comparative Performance of the SMAC Made with the SBS- and ST-Modified Binders, 1406

Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm, 330

Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm

Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988

Design of Pumped Water Distribution Networks with Storage, 1971

Design Robustness of Local Water-Recycling Schemes, 2012

Deterioration Forecasting Model with Multistage Weibull Hazard Functions, 1192

Determination and Optimization of the Maintenance Frequencies in the Overhead Contact Line System, 1893

Extreme Impact Contamination Events Sampling for Water Distribution Systems Security, 1966

Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614

Force Finding of Tensegrity Systems Using Simulated Annealing Algorithm, 1709

Global Optimization of Pavement Structural Parameters during Back-Calculation Using Hybrid Shuffled Complex Evolution Algorithm, 302

Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734

Joint Water Quantity-Quality Management in a Biofuel Production Area—Integrated Economic-Hydrologic Modeling Analysis, 2009

Least-Cost Design of Water Distribution Networks Including Fire Damages, 2026

Life-Cycle Optimization of Pavement Overlay Systems, 1195

Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida, 1976

Logic-Based Design of Groundwater Monitoring Network for Redundancy Reduction, 1967

Maximizing Temporary Housing Safety after Natural Disasters, 1177

Maximizing the Sustainability of Integrated Housing Recovery Efforts, 393

Monitoring Design for Source Identification in Water Distribution Systems, 2024

Multimodal Feeder Network Design Problem: Ant Colony Optimization Approach, 1824

Multiobjective Evolutionary Approach to Rehabilitation of Urban Drainage Systems, 2014

Multiobjective Optimization for Water Distribution System Design Using a Hyperheuristic, 2019

Multiobjective Optimization of Operational Responses for Contaminant Flushing in Water Distribution Networks, 1963

Multiobjective Optimization of Time-Cost Trade-Off Using Harmony Search, 385

Neural Network–Swarm Intelligence Hybrid Nonlinear Optimization Algorithm for Pavement Moduli Back-Calculation, 1844

Neutral Search Technique for Short-Term Pump Schedule Optimization, 1972

New Layer-Moduli Back-Calculation Method Based on the Constrained Extended Kalman Filter, 1790

Novel Approach for Multicriteria Optimization of Life-Cycle Preventive and Essential Maintenance of Deteriorating Structures, 1707

Novel Multiobjective Shuffled Frog Leaping Algorithm with Application to Reservoir Flood Control Operation, 1981

Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114

Optimal Design of Sensor Placement in Water Distribution Networks, 1959

Optimal Distribution and Control of Storage Tank to Mitigate the Impact of New Developments on Receiving Water Quality, 648

Optimal Layout of Gill Cells for Very Large Floating Structures, 1697

Optimal Operation of Complex Water Distribution Systems Using Metamodels, 2002

Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989

Optimal Water Distribution Network Design with Honey-Bee Mating Optimization, 273

Optimization of Underground Water Pumping, 1246

Optimization of Water Distribution Network Design Using Differential Evolution, 1987

Optimizing Resource Utilization during the Recovery of Civil Infrastructure Systems, 1339
Optimizing Structures Subject to Multiple Deflection Constraints and Load Cases Using the Principle of Virtual Work, 1748
Overtopping Probability Constrained Optimal Design of Composite Channels Using Swarm Intelligence Technique, 1259
Pipe Routing through Ant Colony Optimization, 1178
Preliminary Cost Estimation Model Using Case-Based Reasoning and Genetic Algorithms, 307
Pressure-Dependent Leak Detection Model and Its Application to a District Water System, 1970
Probabilistic Analysis of Transient Design for Water Supply Systems, 2028
Profit Optimization for Multiproject Scheduling Problems Considering Cash Flow, 440
Real-Time Implementation of Model Predictive Control on Maricopa-Stanfield Irrigation and Drainage District's WM Canal, 1281
Reliability-Based Design Using Two-Stage Stochastic Optimization with a Treatment of Model Prediction Errors, 603
Reliability-Constrained Optimization of Water Treatment Plant Design Using Genetic Algorithm, 647
Residential Water Demand under Alternative Rate Structures: Simulation Approach, 1999
Review of Sensor Placement Strategies for Contamination Warning Systems in Drinking Water Distribution Systems, 2021
Risk-Based Sensor Placement for Contaminant Detection in Water Distribution Systems, 2023
Robust Design of Water Distribution Networks for a Proactive Risk Management, 1982
Service Distance and Ratio-Based Location-Allocation Models for Siting Recycling Depots, 662
Simulation-Optimization Framework to Support Sustainable Watershed Development by Mimicking the Predevelopment Flow Regime, 1996
Single-Stage Integer Programming Model for Long-Term Transit Fleet Resource Allocation, 1819
SLOTS: Effective Algorithm for Sensor Placement in Water Distribution Systems, 2022
Theoretical Study on Pile Length Optimization of Pile Groups and Piled Rafts, 805
Traffic Modeling and College-Bus Routing Using Entropy Maximization, 1800
Transit-Oriented Land Planning Model Considering Sustainability of Mass Rail Transit, 1944
Two-Dimensional LDV Measurement, Modeling, and Optimal Design of Rectangular Primary Settling Tanks, 669

Optimization models

Data and Modeling Issues Faced during the Efficiency Measurement of Road Maintenance Using Data Envelopment Analysis, 1164
Grid-Enabled Simulation-Optimization Framework for Environmental Characterization, 306
Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016
Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316
Optimum Location of Motorway Interchanges: Users' Perspective, 1892

Orbits

Alternating Direction Implicit Method-Based Nonlinear Filtering for Relative Orbit Estimation, 60
Variational Technique for Spacecraft Trajectory Planning, 56

Oregon

Physically Based Green Roof Model, 1101
Tsunami Preparedness on the Oregon and Washington Coast: Recommendations for Research, 2085

Organic carbon

Advances in Modeling Completely Mixed Flow Reactors for Ion Exchange, 736
Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682

Organic compounds

Diffusive Transport of VOCs through LLDPE and Two Coextruded Geomembranes, 889
Modeling the Temperature Dependence of Adsorption Equilibriums of VOC(s) onto Activated Carbons, 620
Modeling VOC Emissions in the High-Purity Oxygen Activated Sludge Process, 743
SSPRSD Using a Filamentous Fungal Strain *Penicillium expansum BS30* Isolated from Wastewater Sludge, 694

Organic matter

Calibration of Reactive Transport Models for Remediation of Mine Drainage in Solid-Substrate Biocolumns, 714
Characterization of Organic Surfactant on Montmorillonite Nanoclay to Be Used in Bitumen, 1431
Competitive Sorption of Pesticides onto Treated Wood Charcoal and the Effect of Organic and Inorganic Parameters on Adsorption Capacity, 732
Effect of Various Organomodified Montmorillonites on the Properties of Montmorillonite/Bitumen Nanocomposites, 1430
Evaluation of UV LEDs Performance in Photochemical Oxidation of Phenol in the Presence of H_2O_2, 640
Field Evaluation of Bauxite Residue Neutralization by Carbon Dioxide, Vegetation, and Organic Amendments, 726
Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913
Insight into Nitrous Oxide Emissions from Biological Wastewater Treatment and Biosolids Disposal, 2112
Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717
Modeling TOC Breakthrough in Granular Activated Carbon Adsorbers, 631
Natural Organic Matter Removal by Adsorption onto Carbonaceous Nanoparticles and Coagulation, 729
Physical Characterization of Municipal Solid Waste for Geotechnical Purposes, 895
Pilot-Scale Evaluation of Chemical Cleaning Protocols for Organic and Biologically Fouled Microfiltration Membranes, 674
Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174
Simultaneous Organic and Nutrient Removal in a Naturally Ventilated Biotower Treating Presettled Municipal Wastewater, 644

Organizations
Action Research as a Proactive Research Method for Construction Engineering and Management, 323
Adoption and Use of Interorganizational ICT in a Construction Project, 414
Chinese Values and Stressors of Construction Professionals in Hong Kong, 442
Determinants of Efficient Risk Allocation in Privately Financed Public Infrastructure Projects in Australia, 328
Effectiveness of ICT for Construction Information Exchange among Multidisciplinary Project Teams, 295
Emergence and Role of Cultural Boundary Spanners in Global Engineering Project Networks, 1329
Facility Maintenance Performance Perspective to Target Strategic Organizational Objectives, 1513
Global Dimension of Robust Project Network Design, 358
Innovation Diffusion Modeling in the Construction Industry, 347
Inter- and Intraorganizational Trust in International Construction Joint Ventures, 349
MBTI Personality and Hemisphericity of a U.S. Air Force Group, 2072
Mobilizing Institutional Knowledge for International Projects, 357
Obstacles and Disaster Risk Reduction: Survey of Memphis Organizations, 2089
Positive Psychological Capital as a Source of Sustainable Competitive Advantage for Organizations, 348
Project Organizations as Social Networks, 359
Public versus Private Perceptions on Hiring an External Program Manager, 336

Orthotropism
Dynamic Identification of a Concrete Bridge with Orthotropic Plate-Type Deck, 1666

Oscillations
Dimensional Analysis of the Earthquake Response of a Pounding Oscillator, 489
Hydrodynamic Performance of Single- and Double-Wave Screens, 2034

Outfall sewers
Deposition from Particle-Laden, Plane, Turbulent, Buoyant Jets, 5

Outflow
Modification of the Lake Flow Algorithm of the Distributed Hydrological Model HYDROTEL When Modeling Lakes with Multiple Outlets, 1151
Simplified Method for the Characterization of the Hydrograph following a Sudden Partial Dam Break, 1014

Overconsolidated soils
Monitoring and Modeling Grout Efficiency of Lifting Structure in Soft Clay, 35
Shear Strength in Preexisting Landslides, 868

Overflow
Direct Joint Probability Method for Estimating Extreme Sea Levels, 2035
Headworks and Headway, 2161
Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717
Modeling Techniques of Best Management Practices: Rain Barrels and Rain Gardens Using EPA SWMM-5, 1099
Multivariate Polynomial Time-Series Models and Importance Ratios to Qualify Fecal Coliform Sources, 687
Optimal Distribution and Control of Storage Tank to Mitigate the Impact of New Developments on Receiving Water Quality, 648
Parsimonious Model for Combined Sewer Overflow Pollution, 646
Preventing Sewer Blowouts during High-Velocity Jet Cleaning Operations, 1191
An Urban Approach to LID, 2208

Owners
Case Law and Variations in Cumulative Impact Productivity Claims, 397
Critical Success Factors for Stakeholder Management: Construction Practitioners' Perspectives, 391
Management of Redeveloped Industrial Areas with Mixed Use in The Netherlands, 1300
Public versus Private Perceptions on Hiring an External Program Manager, 336

Oxidation
Aerobic Methane Oxidation Coupled to Denitrification: Kinetics and Effect of Oxygen Supply, 632
Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865
Biocover Performance of Landfill Methane Oxidation: Experimental Results, 702
Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691
Effects of Thickness on the Aging of HDPE Geomembranes, 803
Electron Beam Irradiation for Mercury Oxidation and Mercury Emissions Control, 675
Evaluation of UV LEDs Performance in Photochemical Oxidation of Phenol in the Presence of H_2O_2, 640
Evidence and Long-Term Feasibility of Enhanced Biological Phosphorus Removal in Oxidation-Ditch Type of Aerated-Anoxic Activated Sludge Systems, 748
Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614
Industrial Plant for Olive Mill Wastewater from Two-Phase Treatment by Chemical Oxidation, 757
Kinetics of Arsenite Oxidation by Chemoautotrophic *Thiomonas arsenivorans* Strain b6 in a Continuous Stirred Tank Reactor, 735
Modeling Arsenite Adsorption on Rusting Metallic Iron, 657
Modeling the Oxidation of Sulfide in Pulp and Paper Wastewaters, 741
Treatment of TCE-Contaminated Groundwater Using Fenton-Like Oxidation Activated with Basic Oxygen Furnace Slag, 642
Use of Ozone-Photocatalytic Oxidation (O_3/UV/TiO_2) and Biological Remediation for Treatment of Produced Water from Petroleum Refineries, 613

Oxygen
Catalytic Decomposition of CFC-12 over Solid Super Acid Mo_2O_3/ZrO_2, 770

Oxygen demand
Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691
Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717
Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617

Oxygen transfer
Modeling VOC Emissions in the High-Purity Oxygen Activated Sludge Process, 743

Ozone
Large Eddy Simulation of Flow and Tracer Transport in Multichamber Ozone Contactors, 611
Use of Ozone-Photocatalytic Oxidation (O_3/UV/TiO_2) and Biological Remediation for Treatment of Produced Water from Petroleum Refineries, 613

Ozonization
Removal of Toluene Using UV-Irradiated and Nonthermal Plasma–Driven Photocatalyst System, 747

Panels
Experimental Performance of Full-Depth Precast, Prestressed Concrete Overhang, Bridge Deck Panels, 142
Nondeformability of Ventilated and Mortar-Embedded Marble Facade Panels, 1496
Structural Characterization of Composite Structural Insulated Panels for Exterior Wall Applications, 223
Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

Paper mills
Benthal Solids Properties Influencing ASB Design and Operating Practices, 633
Biological and Abiotic Color Reduction of Paper Mill Effluents during Anaerobic Composting, 692
Modeling the Oxidation of Sulfide in Pulp and Paper Wastewaters, 741

Parallel processing
Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316
Workload Distribution Framework for the Parallel Solution of Large Structural Models on Heterogeneous PC Clusters, 276

Parameters
Application of Hansen Solubility Parameters to Predict Compatibility of SBS-Modified Bitumen, 1428
Calibration of the SMCS Criterion for Ductile Fracture in Steels: Specimen Size Dependence and Parameter Assessment, 598
Comparison of Different Irrigation Methods Based on the Parametric Evaluation Approach in Abbas Plain: Iran, 1213
Correspondence between the Campbell and van Genuchten Soil-Water-Retention Models, 1262
Damage Identification in a Truss Tower by Regularized Model Updating, 1637
Damping Parameter Identification and Study of Metal Foam Filled Steel Tube, 1384
Determination of Form Friction Factor, 1080
Determination of the Main Parameters of Alkali Silica Reaction Using System Identification Method, 1441
Diagnostic Curves for Identifying Leaky Aquifer Parameters with or without Aquitard Storage, 1204
Effect of Watershed Subdivision on SWAT Modeling with Consideration of Parameter Uncertainty, 1161
Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783
Estimation of Friction Factor in Open Channels, 1082
Estimation of Unsaturated Hydraulic Parameters from Infiltration and Internal Drainage Experiments, 1283
Feature Selection Using Stochastic Search: An Application to System Identification, 262
Flexural Lateral Load Distribution Characteristics of Sandwich Plate System Bridges: Parametric Investigation, 159
Global Navigation Satellite System Ambiguity Resolution with Constraints from Normal Equations, 1774
Impulse Product Parameter in Landslide Generated Impulse Waves, 2043
Influence of Rocking Motion on Vibratory Roller-Based Measurement of Soil Stiffness, 546
Low-Dimensional Proper Orthogonal Decomposition Modeling as a Fast Approach of Aerodynamic Data Estimation, 43
Mesomechanical Model for Numerical Study of Two-Dimensional Triaxially Braided Composite, 595
Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas. I, 9
Modeling Urban Storm-Water Quality Treatment: Model Development and Application to a Surface Sand Filter, 616
New Parameter to Evaluate Moisture Damage of Asphalt-Aggregate Bond in Using Dynamic Shear Rheometer, 1370
Noniterative Approach for Solving the Indirect Problems of Linear Reference Frame Transformations, 1784
Nonparametric Simulation of Single-Site Seasonal Streamflows, 1086
Parameter Estimation for Nonlinear Muskingum Model Based on Immune Clonal Selection Algorithm, 1140
Parametric Dependency and Trends of HDD Pull Loads, 1569
Probabilistic Push-Over Analysis of Structural and Soil-Structure Systems, 1738
Sensitivity Analysis for an Infiltration-Runoff Model with Parameter Uncertainty, 1122
Sensitivity of Field Data Estimates in One-Dimensional Hydraulic Modeling of Channels, 983
Simple Method for Quick Estimation of Leaky-Aquifer Parameters, 1217
Stabilized Dredged Material. I: Parametric Study, 875
Stated Preference Approach for Valuation of Travel Time Displayed as Traffic Information on a VMS Board, 1941
Structural Condition Assessment of Sewer Pipelines, 1512
Structural Reliability Estimation with Vibration-Based Identified Parameters, 469
Unified Approach to the Characterization of Coupled Composite Laminates: Benchmark Configurations and Special Cases, 64

Parking facilities
The Art of Parking, 2211

Parks
Human-Environment Interactions Based on Biophilia Values in an Urban Context: Case Study, 1935

Particle distribution
Contribution of Traffic-Generated Nonexhaust PAHs, Elemental Carbon, and Organic Carbon Emission to Air and Urban Runoff Pollution, 774

Particle size
Observations on Sand Jets in Air, 577

Particle size distribution
Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629
Hydraulic Model for Sedimentation in Storm-Water Detention Basins, 672
Inverse Method for Estimating the Spatial Variability of Soil Particle Size Distribution from Observed Soil Moisture, 1149
Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes, 1389
Modeling Particle-Size Distribution Dynamics during Precipitative Softening, 610

Particles
Adsorption Mechanism of Arsenate on Crystal γ-Fe_2O_3 Nanoparticles, 712
Application of Riprap and Collar to Prevent Scouring around Rectangular Bridge Piers, 962
Degradation of Chlorobenzene in Water Using Nanoscale Cu Coupled with Microwave Irradiation, 658
Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628
Effect of Fine Particle Migration on the Small-Strain Stiffness of Unsaturated Soils, 834
Effectiveness of Moisture and Fixatives in Controlling Mobility of Contaminated Soil Particles by Wind Forces, 2119
Experimental Study of Particle Motion on a Smooth Bed under Shoaling Waves Using Particle Image Velocimetry, 543
Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition, 956
Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition
Lake Effect in Wellhead Protection, 2000
Mathematical Model for the Sequestering of Chemical Contaminants by Magnetic Particles, 750
Model to Quantify Removal and Inactivation of Microorganisms Occluded in Effluent Wastewater Particles Using Filtration and Disinfection Systems, 739
Modeling of Ground Excavation with the Particle Finite-Element Method, 504
Natural Organic Matter Removal by Adsorption onto Carbonaceous Nanoparticles and Coagulation, 729
Numerical Age and Residence-Time Mapping for a Small Tidal Creek: Case Study, 2049
Overtopping Probability Constrained Optimal Design of Composite Channels Using Swarm Intelligence Technique, 1259
Particle Fluxes into Permeable Sediments: Comparison of Mechanisms Mediating Deposition, 965
Real-Time Identification of Possible Contamination Sources Using Network Backtracking Methods, 2003
Shear Band Formation Observed in Ring Shear Tests on Sandy Soils, 809

Partnerships
Critical Success Factors for PPPs in Infrastructure Developments: Chinese Perspective, 363
Determinants of Efficient Risk Allocation in Privately Financed Public Infrastructure Projects in Australia, 328
Enabling Development of the Transportation Public-Private Partnership Market in the United States, 354
First Public-Private-Partnership Application in Taiwan's Wastewater Treatment Sector: Case Study of the Nanzih BOT Wastewater Treatment Project, 406
Methodological Framework for Evaluation of Financial Viability of Public-Private Partnerships: Investment Risk Approach, 1188
Neurofuzzy Decision Support System for Efficient Risk Allocation in Public-Private Partnership Infrastructure Projects, 310
Partnering Process Model for Public-Sector Fast-Track Design-Build Projects in Korea, 1319
Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326
Potential Obstacles to Successful Implementation of Public-Private Partnerships in Beijing and the Hong Kong Special Administrative Region, 1320
PPP Experiences in Indian Cities: Barriers, Enablers, and the Way Forward, 356
Price Competitive Alliance Projects: Identification of Success Factors for Public Clients, 409
Risk Allocation in Public-Private Partnership Infrastructure Projects: Comparative Study, 1198

Passengers
Influence of Platform Walking on BRT Station Bus Dwell Time Estimation: Australian Analysis, 1915
Multiobjective Transit Passenger Information System Design Using GIS, 1920

Passive control
Feasibility Test of Adaptive Passive Control System Using MR Fluid Damper with Electromagnetic Induction Part, 484

Passive pressure
Increased Lateral Abutment Resistance from Gravel Backfills of Limited Width, 795
Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932

Pathogens
Enhanced Estimation of Terrestrial Loadings for TMDLs: Normalization Approach, 1995
Linking Pathogen Sources to Water Quality in Small Urban Streams, 637

Pavement management
Assessing the Agreement among Pavement Condition Indexes, 1870
Effects of Pavement Spatial Variability on Contractor's Management Strategies, 1187
Integration of GIS and Data Mining Technology to Enhance the Pavement Management Decision Making, 1825
Rank Correlation Method for Evaluating Manual Pavement Distress Data Variability, 1169
Using Fuzzy Logic and Expert System Approaches in Evaluating Flexible Pavement Distress: Case Study, 1805

Pavement markings

Impact of Bead Density on Paint Pavement Marking Retroreflectivity, 1871

Performance Evaluation of No Track Thermoplastic Traffic Markings, 1896

Pavement overlays

Development, Calibration, and Verification of a New Mechanistic-Empirical Reflective Cracking Model for HMA Overlay Thickness Design and Analysis, 1827

Empirical Modeling of Pavement Overlay Crack Progression with Field Data, 1193

Life-Cycle Optimization of Pavement Overlay Systems, 1195

Mesh-Independent Fracture Modeling for Overlay Pavement System under Heavy Aircraft Gear Loadings, 1828

Slippage Failure of a New Hot-Mix Asphalt Overlay, 1521

Pavements

Application of Shakedown Theory in Characterizing Traditional and Recycled Pavement Base Materials, 1813

Characterization of Cementitiously Stabilized Granular Materials for Pavement Design Using Unconfined Compression and IDT Testings with Internal Displacement Measurements, 1396

Characterization of Rutting (Permanent Strain) Development of A-2-4 and A-4 Subgrade Soils under the HVS Loading, 1534

Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction, 1465

Comparative Study of Static and Dynamic Falling Weight Deflectometer Back-Calculations Using Probabilistic Approach, 1811

Contractor Performance Evaluation for the Best Value of Superpave Projects, 374

Critical Analysis of Different Hilbert-Huang Algorithms for Pavement Profile Evaluation, 309

Critical Assessment of Pavement Distress Segmentation Methods, 1789

Diffusion Wave Model for Simulating Storm-Water Runoff on Highway Pavement Surfaces at Superelevation Transition, 1020

Dynamic Response Solution in Transient State of Viscoelastic Road under Moving Load and Its Application, 475

Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Effects of Recycled Materials on Long-Term Performance of Cold In-Place Recycled Asphalt Roads, 1523

Estimation of Remaining Service Life of Flexible Pavements from Surface Deflections, 1826

Estimation of Resilient Modulus of Subgrade Soils for Design of Pavement Structures, 1422

Evaluation of Subgrade Strength and Pavement Designs for Reliability, 1829

Evaluation of the Effect of Pavement Roughness on Skid Resistance, 1857

Experimental Estimation of the Relative Deterioration of Surface Maintenance Treatments, 1788

Finite-Element Model Approach to Determine Support Conditions and Effective Layout for Concrete Block Paving, 1471

GeoFlorida 2010, 2247

GeoTrends, 2249

Gray Clustering-Based Pavement Performance Evaluation, 1792

ICCTP 2010, 2257

Implementation of a Critical State Two-Surface Model to Evaluate the Response of Geosynthetic Reinforced Pavements, 33

Inspection and Condition Assessment Using Ground Penetrating Radar, 793

Modeling Pavement Fragility, 1851

Modeling Skid Resistance of Commercial Trucks on Highways, 1842

Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties, 12

On the Study of Polishing of Road Surface under Traffic Load, 1793

Optimizing Rolling Patterns for Chip Seals Using Laboratory Aggregate Loss Performance Tests on Field Fabricated Samples, 1520

Parameter Identification Procedure for Heterogeneous Viscoelastic Composites Using Iterative Functions, 541

Pavement Interactive: Pavement Knowledge Transfer with Web 2.0, 1914

Paving Materials and Pavement Analysis (GSP 203), 2267

Performance of a Stabilized Aggregate Base Subject to Different Durability Procedures, 1397

Prediction of Permanent Deformations in Pavements Using a High-Cycle Accumulation Model, 845

Rating City and County of Denver Urban Pavement Constructability Using a Profiler, 2133

Road Roughness and Whole Body Vibration: Evaluation Tools and Comfort Limits, 1876

Roughness Model Accounting for Heterogeneity Based on In-Service Pavement Performance Data, 1812

Side-by-Side Comparison of Nitrogen Species Removal for Four Types of Permeable Pavement and Standard Asphalt in Eastern North Carolina, 1107

Traffic and Transportation Studies 2010, 2289

Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103

Payment

Contractor Performance Evaluation for the Best Value of Superpave Projects, 374

PCB

Effect of Cocontaminants on the Remediation of PCB-Impacted Soils by Hydrogen Peroxide, 2127

Microwave-Enhanced Thermal Desorption of Polyhalogenated Biphenyls from Contaminated Soil, 643

Practical Method to Extract and Dechlorinate PCBs in Soils, 2105

Peak flow

Estimating an Impedance-to-Flow Parameter for Flood Peak Prediction in Semiarid Watersheds, 1074

Pedestrians

Assessment of the Pedestrianization Policy in Vigan City: UNESCO World Heritage Site, 1918

Bidirectional Pedestrian Stream Model with Oblique Intersecting Angle, 1815

Pedestrian Flow Characteristics in Mixed Traffic Conditions, 1919

Putting Cities Back on Their Feet, 1942

Queuing Model for Assessing the Efficiency of Building Corridors, 76

Right Turns on Green and Pedestrian Level of Service: Statistical Assessment, 1

Theoretical Framework for Modeling Pedestrians' Crossing Behavior along a Trip, 1887

Penetration tests

Effect of Secondary Impacts on SPT Rod Energy and Sampler Penetration, 824

Simplified Approximation Procedure for Performance-Based Evaluation of Liquefaction Potential, 787

Strength Measurement for Near-Seabed Surface Soft Soil Using Manually Operated Miniature Full-Flow Penetrometer, 925

Penetrometers

CPT-Based Evaluation of Liquefaction and Lateral Spreading in Centrifuge, 904

Pennsylvania

Flash Flooding in the Philadelphia Metropolitan Region, 1058

High Rolling Steel, 2167

Lewis Wernwag and the Colossus of 1812, 2152

Peerless Pier Caps, 2219

Theodore Burr and the Harrisburg Old Camelback Bridge, 2151

Performance characteristics

Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312

Assessment of the Use of Hot-Mix Recycled Asphalt Concrete in Plant, 1913

Design and Performance of a 46-m-High MSE Wall, 851

Effects of Coarse Aggregate Coatings on Concrete Performance, 1350

Impact of Irrigation Management Transfer on Land and Water Productivity and Water Supply in the Gediz Basin, Turkey, 1233

Influence of Recycled Asphalt Pavement on Fatigue Performance of Asphalt Concrete Base Courses, 1413

Performance Assessment of Construction Companies Integrating Key Performance Indicators and Data Envelopment Analysis, 372

Performance of Bridge Materials by Structural Deficiency Analysis, 1530

Performance of International Joint Ventures in Construction, 1336

Performance of MBE/DBE/WBE Construction Firms in Transportation Projects, 390

Permafrost

Thermal Interaction between Permafrost and the Qinghai-Tibet Railway, 175

Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176

Permeability

Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

Diffusive Transport of VOCs through LLDPE and Two Coextruded Geomembranes, 889

Drainability of Permeable Friction Course Mixtures, 1403

Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Effective Porosity Measurement of a Marine Clay, 689

Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924

Permeability Reduction in Pervious Concretes due to Clogging: Experiments and Modeling, 1424

Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103

Wave Overtopping and Damage Progression of Stone Armor Layer, 2052

Personnel management

Chinese Values and Stressors of Construction Professionals in Hong Kong, 442

Forecasting Construction Manpower Demand by Gray Model, 443

MBTI Personality and Hemisphericity of a U.S. Air Force Group, 2072

Work-Family Conflict in Construction: Case for a Finer-Grained Analysis, 433

Peru

Assessment of Mortar and Brick Strength in Earthquake-Affected Structures in Peru Using a Schmidt Hammer, 1560

Below-Average Bidding Method, 408

Pisco, Peru, Earthquake of August 15, 2007, 2269

Pesticides

Competitive Sorption of Pesticides onto Treated Wood Charcoal and the Effect of Organic and Inorganic Parameters on Adsorption Capacity, 732

Emerging Contaminants of Environmental Concern: Source, Transport, Fate, and Treatment, 2096

Petroleum

Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

Petroleum refining

Design of Blast-Resistant Buildings in Petrochemical Facilities, 2234

pH

Luminol-Based Enhanced Chemiluminescence Assay for Quantification of Peroxidase and Hydrogen Peroxide in Aqueous Solutions: Effect of Reagent pH and Ionic Strength, 738

Photoreduction of Reactive Brilliant Red X-3B by Ultraviolet Irradiation/Potassium Borohydride/Sodium Bisulfite, 758

Removal of Trichlorobenzene from Flue Gas Using Complex Absorbent, 767

Volumetric Filtration of Rainfall Runoff. II: Event-Based and Interevent Nutrient Fate, 760

Phenol

Evaluation of UV LEDs Performance in Photochemical Oxidation of Phenol in the Presence of H_2O_2, 640

Luminol-Based Enhanced Chemiluminescence Assay for Quantification of Peroxidase and Hydrogen Peroxide in Aqueous Solutions: Effect of Reagent pH and Ionic Strength, 738

Philippine Islands

Assessment of the Pedestrianization Policy in Vigan City: UNESCO World Heritage Site, 1918

New Reference Wind Speed for Wind Turbines in Typhoon-Prone Areas in the Philippines, 1654

Phosphate

Bench-Scale Evaluation of Chemically Bonded Phosphate Ceramic Technology to Stabilize Mercury Waste Mixtures, 639

Evaluation of Electric Arc Furnace Slag as a Potential Phosphate-Removal Substrate, 649

Evidence and Long-Term Feasibility of Enhanced Biological Phosphorus Removal in Oxidation-Ditch Type of Aerated-Anoxic Activated Sludge Systems, 748

In Situ Microscale Analyses of Activated Sludge Flocs in the Enhanced Biological Phosphate Removal Process by the Use of Microelectrodes and Fluorescent In Situ Hybridization, 676

Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660

Phosphorus

Effect of Carbon Source on Biological Nitrogen and Phosphorus Removal in an Anaerobic-Anoxic-Oxic (A^2O) Process, 749

Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713

Evaluation of Electric Arc Furnace Slag as a Potential Phosphate-Removal Substrate, 649

Evidence and Long-Term Feasibility of Enhanced Biological Phosphorus Removal in Oxidation-Ditch Type of Aerated-Anoxic Activated Sludge Systems, 748

Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746

Phosphorus Budget and Remediation Plan for Big Platte Lake, Michigan, 2017

Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174

Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617

Transport and Distribution of Particulate Matter Phosphorus Fractions in Rainfall-Runoff from Roadway Source Areas, 744

Volumetric Filtration of Rainfall Runoff. II: Event-Based and Interevent Nutrient Fate, 760

Photogrammetry

Assessing the Accuracy of Applying Photogrammetry to Take Geometric Measurements on Building Products, 339

Three-Dimensional Structural Translation and Rotation Measurement Using Monocular Videogrammetry, 540

Photography

Assessing the Accuracy of Applying Photogrammetry to Take Geometric Measurements on Building Products, 339

Automated Detection and Location of Leaks in Water Mains Using Infrared Photography, 1519

Physical properties

Stabilized Dredged Material. I: Parametric Study, 875

Stabilized Dredged Material. II: Geomechanical Behavior, 876

Piers

Bidirectional Seismic Behavior of Controlled Rocking Four-Legged Bridge Steel Truss Piers, 1754

Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003

Bridge Pier Scour under Flood Waves, 1031

Bridge Scour: Prediction, Modeling, Monitoring, and Countermeasures—Review, 2142

Charles Macdonald, 148

Design of Dynamically Wind-Loaded Helical Piers for Small Wind Turbines, 1538

Equivalent Barge and Flotilla Impact Forces on Bridge Piers, 144

Experimental Investigation of Clear-Water Local Scour of Compound Piers, 979

Experimental Study of Three-Dimensional Flow Field around a Complex Bridge Pier, 473

Genetic Programming to Predict Bridge Pier Scour, 958

Lateral Spreading Forces on Bridge Piers and Pile Caps in Laterally Spreading Soil: Effect of Angle of Incidence, 928

Nonlinear Efficiency of Bored Pile Group under Lateral Loading, 936

Peerless Pier Caps, 2219

Seismic Testing of a Bridge Steel Truss Pier Designed for Controlled Rocking, 1755

Simplified Procedure for Seismic Evaluation of Piles with Partial-Moment Connection to the Deck in Marine Oil Terminals, 1660

Piezoelectricity

Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500

Embedded Cement-Based Piezoelectric Sensors for Acoustic Emission Detection in Concrete, 1494

Pile caps

Increased Lateral Abutment Resistance from Gravel Backfills of Limited Width, 795

Lateral Spreading Forces on Bridge Piers and Pile Caps in Laterally Spreading Soil: Effect of Angle of Incidence, 928

Pile driving

Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth, 917

Pile foundations

Application of BGPR Logging: Two Case Studies, 848

Current Design and Construction Practices of Bridge Pile Foundations with Emphasis on Implementation of LRFD, 166

Experimental Study of Eccentrically Loaded Raft with Connected and Unconnected Short Piles, 909

Failure Mechanisms of Pile Foundations in Liquefiable Soil: Parametric Study, 19

Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97

Probabilistic Performance-Based Procedure to Evaluate Pile Foundations at Sites with Liquefaction-Induced Lateral Displacement, 819

Reduction Factor for the Unloading Point Method at Clay Soil Sites, 837

Role of Linear Elasticity in Pile Group Analysis and Load Test Interpretation, 937

Theoretical p-y Curves for Laterally Loaded Single Piles in Undrained Clay Using Bezier Curves, 800

Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth, 917

Weighted Residual Numerical Differentiation Algorithm Applied to Experimental Bending Moment Data, 857

Pile groups

Experimental Investigation of Clear-Water Local Scour of Compound Piers, 979

Group Interaction Effects on Laterally Loaded Piles in Clay, 830

Nonlinear Efficiency of Bored Pile Group under Lateral Loading, 936

Role of Linear Elasticity in Pile Group Analysis and Load Test Interpretation, 937

Shaking Table Model Tests on Pile Groups behind Quay Walls Subjected to Lateral Spreading, 820

Theoretical Study on Pile Length Optimization of Pile Groups and Piled Rafts, 805

Pile tests

Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97

Piles

Application of a SOM-Based Optimization Algorithm in Minimizing Construction Time for Secant Pile Wall, 432

Behavior of Step Tapered Bored Piles in Sand under Static Lateral Loading, 839

Compressive Creep of Virgin HDPE Using Equivalent Strain Energy Density Method, 1488

Current Design and Construction Practices of Bridge Pile Foundations with Emphasis on Implementation of LRFD, 166

Effective Repair for Corrosion Control Using FRP Wraps, 215

Effects of the Source on Wave Propagation in Pile Integrity Testing, 892

Estimation of Lateral Load Capacity of Rigid Short Piles in Sands Using CPT Results, 779

Field Tests on Pile-Supported Embankments over Soft Ground, 850

Free-Field Measurements to Disclose Lateral Reaction Mechanism of Piles Subjected to Soil Movements, 806

Improved Design of Embedment Depths for Transmission Pole Foundations Subject to Lateral Loading, 2137

Influence of Tailwater Depth and Pile Position on Scour Downstream of Block Ramps, 1212

New Structural Model for Multicomponent Pile Cross Sections under Axial Load, 859

Nonlinear Analysis of Torsionally Loaded Piles in a Two-Layer Soil Profile, 18

Seismic Behavior of Batter Piles: Elastic Response, 891

Seismic Displacement of Slopes Reinforced with Piles, 860

Simplified Procedure for Seismic Evaluation of Piles with Partial-Moment Connection to the Deck in Marine Oil Terminals, 1660

Stability Analysis of Strain-Softening Slope Reinforced with Stabilizing Piles, 927

Structural Behavior of a Pile-Supported Embankment, 777

Undrained Lateral Pile Response in Sloping Ground, 918

Pipe bedding

Nonlinear Finite-Element-Based Investigation of the Effect of Bedding Thickness on Buried Concrete Pipe, 1873

Pipe flow

Assessment of Rheological Characteristics of a Natural Bingham-Plastic Mixture in Turbulent Pipe Flow, 1027

Evaluation of Unsteady Wall Shear Stress by Zielke's Method, 990

Investigation of Flow through Orifices in Riser Pipes, 1238

Manifold Flow in Pressure-Distribution Systems, 1576

Nonconservative Formulation of Unsteady Pipe Flow Model, 993

Preventing Sewer Blowouts during High-Velocity Jet Cleaning Operations, 1191

Quantifying Linearization Error When Modeling Fluid Pipeline Transients Using the Frequency Response Method, 1029

Slip-Lined Culvert Inlet End Treatment Hydraulics, 1202

Pipe materials

Effectiveness of Viscoelastic Models for Prediction of Tensile Axial Strains during Cyclic Loading of High-Density Polyethylene Pipe, 1570

Pipe networks

Calibration and Optimization of the Pumping and Disinfection of a Real Water Supply System, 2008

Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988

Considering Actual Pipe Connections in Water Distribution Network Analysis, 1035

Frequency-Domain Modeling of Transients in Pipe Networks with Compound Nodes Using a Laplace-Domain Admittance Matrix, 1018

Pipe Routing through Ant Colony Optimization, 1178

Pipelines

Analysis of Soil Strength Degradation during Episodes of Cyclic Loading, Illustrated by the T-Bar Penetration Test, 23

Capsule Separation by Linear Induction Motor in Pneumatic Capsule Pipeline Freight Transport System, 1571

Experiments on the Buckling Behavior of Ring-Stiffened Pipelines under Hydrostatic Pressure, 505

Genetic Programming to Predict River Pipeline Scour, 1577

Long-Range Facility Planning Based on Dynamic Programming for Optimum Combined Cost and Probability Paths, 1562

Physical Modeling of Lateral Clay-Pipe Interaction, 867

Pipelines 2010, 2268

Quantifying Linearization Error When Modeling Fluid Pipeline Transients Using the Frequency Response Method, 1029

Ring-Reinforced Pipelines: That Moment of Mystery, 1568

Risk Evaluation for Maxi Horizontal Directional Drilling Crossing Projects, 1572

Seismic Damage Estimation for Buried Pipelines: Challenges after Three Decades of Progress, 1563

Structural Deformation Characteristics of Installed HDPE Circular Pipelines, 1821

Tunneling beneath Buried Pipes: View of Soil Strain and Its Effect on Pipeline Behavior, 935

Pipes

Apparatus for Testing the Combined Effects of Deformation and Chemical Exposure on Polymeric Liners, 1365

Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

Cost Estimating Models for Utility Rehabilitation Projects: Neural Networks versus Regression, 1574

Energy Losses in Cross Junctions, 946

Exploring the Relationship between Soil Properties and Deterioration of Metallic Pipes Using Predictive Data Mining Methods, 288

Hydraulic Deterioration Models for Storm-Water Drainage Pipes: Ordered Probit versus Probabilistic Neural Network, 275

Integrated Conveyance Condition Assessment Techniques Support Asset Management and Capacity Driven Projects, 1573

Manifold Flow in Pressure-Distribution Systems, 1576

Parametric Dependency and Trends of HDD Pull Loads, 1569

Probability of Failure Analysis due to Internal Corrosion in Cast-Iron Pipes, 1170

Scheduling Renewal of Water Pipes While Considering Adjacency of Infrastructure Works and Economies of Scale, 2011

Simplified Numerical and Analytical Approach for Solutes in Turbulent Flow Reacting with Smooth Pipe Walls, 1005

Stack Pipe Model for Pipe Jacking Method, 382

Time-Dependent Reliability Analysis of FRP Rehabilitated Pipes, 203

Wall Shear Stress in Transient Turbulent Pipe Flow by Local Velocity Measurement, 1016

Plane strain

Development of Nonlinear Railway Track Model Applying Modified Plane Strain Technique, 1903

Planning

Application of Innovative Critical Chain Method for Project Planning and Control under Resource Constraints and Uncertainty, 419

Case Study on the Evaluation of Equipment Flow at a Construction Site, 314

Causes of Delay in the Planning and Design Phases for Construction Projects, 84

Challenges in Transportation Planning for Asian Cities, 1916

Clearing the Utilities on Time and Under Budget, 2064

Comparison of Using Mixed-Integer Programming and Genetic Algorithms for Construction Site Facility Layout Planning, 425

Developing an ARIS-House-Based Method from Existing Information Systems to Project-Based Enterprise Resource Planning for General Contractor, 334

Economics and Finance for Engineers and Planners, 2238

Effect of Preconstruction Planning Effort on Sheet Metal Project Performance, 338

Evaluating Unplanned Stand-Alone Transportation Projects: Linking Incremental and Comprehensive Planning, 1952

Evolution and Development of Multiairport Systems: Worldwide Perspective, 1898

Housing Law Is Dead. Long Live European Housing Law?, 1295

ICCTP 2010, 2257

Improved SWOT Approach for Conducting Strategic Planning in the Construction Industry, 445

Improving Planning Reliability and Project Performance Using the Reliable Commitment Model, 426

Infrastructure Development Strategies for Inclusive Growth: India's Eleventh Plan, 2068

Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Integrated Planning Framework for Urban River Rehabilitation, 2029

Integrated Schedule and Cost Model for Repetitive Construction Process, 1325

Long-Range Facility Planning Based on Dynamic Programming for Optimum Combined Cost and Probability Paths, 1562

Management Thinking in the Earned Value Method System and the Last Planner System, 1337

Modeling Microtunneling Projects using Computer Simulation, 381

Precedence-Preserving GAs Operators for Scheduling Problems with Activities' Start Times Encoding, 293

Seasonal Residential Water Demand Forecasting for Census Tracts, 1961

Simplest Way to Reach the Most Complicated Goal: "In the Urban Planning, Questions Are Ours and Answers Are the Natives's", 1934

Spatial Decision Support System for Urban Planning: Case Study of Harbin City in China, 1933

Special Report: The Infrastructure Roundtables: Concluding Thoughts—Develop Federal, Regional, and State Infrastructure Plans, 2182

Special Report: The Infrastructure Roundtables: Develop Federal, Regional, and State Infrastructure Plans, 2176

State of the Art for Genetic Algorithms and Beyond in Water Resources Planning and Management, 2001

Systematic Framework for Incorporating Safety in Network-Level Transportation Planning and Programming, 1834

Transferability of Community-Based Collision Prediction Models for Use in Road Safety Planning Applications, 1882

Plastic analysis

Lateral Spreading Forces on Bridge Piers and Pile Caps in Laterally Spreading Soil: Effect of Angle of Incidence, 928

Plastic Behavior of Shear Tabs Welded to Flexible Wall Support, 1725

Plastic hinges

Elongation of Reinforced Concrete Members Subjected to Cyclic Loading, 1711

Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740

Parallel Axial-Flexural Hinge Model for Nonlinear Dynamic Progressive Collapse Analysis of Welded Steel Moment Frames, 1623

Seismic Performance Parameters for Reinforced Concrete-Block Shear Wall Construction, 1495

Plasticity
Application of Exponential-Based Methods in Integrating the Constitutive Equations with Multicomponent Nonlinear Kinematic Hardening, 606
Convexity of Yield Surface with Directional Distortional Hardening Rules, 507
Finite-Element Simulations of Full-Scale Modular-Block Reinforced Soil Retaining Walls under Earthquake Loading, 523
Influence of Nonlinearity on the Stress Distribution in the Soil—Application to Road Engineering Problems, 1797
Length Scales Interaction in Nonlocal Plastic Strain Localization of Bars of Varying Section, 561
Limit Analysis and Stability Charts for 3D Slope Failures, 831
Mechanics of Drag Embedment Anchors in a Soft Seabed, 780
Mesh Dependence and Nonlocal Regularization of One-Dimensional Strain Softening Plasticity, 594
Mesoscale Approach to Modeling Concrete Subjected to Thermomechanical Loading, 491
Modeling Stress-Dilatancy for Sand under Compression and Extension Loading Conditions, 535
Shear Strength of Steel Fiber-Reinforced Ultrahigh-Performance Concrete Beams without Stirrups, 1743
Simple Yield Surface Expressions Appropriate for Soil Plasticity, 29
Truss Modeling of Concrete Columns in Compression, 558
Undrained Capacity of Plate Anchors under General Loading, 908
Upper Bound Plastic Interaction Relations for Elliptical Hollow Sections, 559

Plastics
Anaerobic Biodegradation of Polyhydroxybutyrate in Municipal Sewage Sludge, 693
Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235
Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532

Plates
Analysis of Snap-Back Instability due to End-Plate Debonding in Strengthened Beams, 479
Analytical and Numerical Models of Postbuckling of Orthotropic Symmetric Plates, 589
Closed-Form Solutions for Buckling of Long Anisotropic Plates with Various Boundary Conditions under Axial Compression, 569
Comparison of Block-Shear and Whitmore Section Methods for Load Rating Existing Steel Truss Gusset Plate Connections, 110
Hygrothermoelastic Postbuckling Response of Laminated Composite Plates, 39
I-35W Bridge Collapse, 151
Inelastic Plate Buckling, 571
Influence of Flexibility on the Fatigue Performance of the Base Plate Connection in High-Mast Lighting Towers, 1639
Interface Behavior of a Bimaterial Plate under Dynamic Loading, 579
Load Configuration and Lateral Distribution of NATO Wheeled Military Trucks for Steel I-Girder Bridges, 165
Optimization of Cement Grouts Containing Silica Fume and Viscosity Modifying Admixture, 1377
Rapid Ranking Procedures for Gusset Plate Connections in Existing Steel Truss Bridges, 149
Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714
Three-Dimensional Large Deformation Finite-Element Analysis of Plate Anchors in Uniform Clay, 808
Unified Flexural Resistance Equations for Stability Design of Steel I-Section Members: Overview, 8

Platforms
Reduction-Based Model Updating of a Scaled Offshore Platform Structure, 472
Structural Behavior of a Pile-Supported Embankment, 777

Plumes
Effects of Bubble Size and Diffusing Area on Destratification Efficiency in Bubble Plumes of Two-Layer Stratification, 951
Experimental Study of Sand and Slurry Jets in Water, 1017

Plunging flow
Energy Dissipative Plunging Flows, 996

Pneumatic systems
Capsule Separation by Linear Induction Motor in Pneumatic Capsule Pipeline Freight Transport System, 1571

Poisson ratio
Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509
Determination of Shear and Bulk Moduli of Viscoelastic Solids from the Indirect Tension Creep Test, 565
Gauging Rivers during All Seasons Using the Q2D Velocity Index Method, 963

Poles
Extending the Service Life of Electric Distribution and Transmission Wooden Poles Using a Wet Layup FRP Composite Strengthening System, 1537
Improved Design of Embedment Depths for Transmission Pole Foundations Subject to Lateral Loading, 2137
Tests and Analysis of Cantilevered GFRP Tubular Poles with Partial Concrete Filling, 187
Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531

Policies
Boost, Control, or Both of Korean Housing Market: 831 Countermeasures, 383

Political factors
Political, Economic, and Legal Risks Faced in International Projects: Case Study of Vietnam, 1597

Pollutants
Design Aid for Water Quality Detention Basins, 1059
Emerging Contaminants of Environmental Concern: Source, Transport, Fate, and Treatment, 2096
Extended Kalman Filtering to Improve the Accuracy of a Subsurface Contaminant Transport Model, 664
Field Procedures for Real-World Measurements of Emissions from Diesel Construction Vehicles, 1186

Mathematical Model for the Sequestering of Chemical Contaminants by Magnetic Particles, 750

Parking Deck's First Flush, 1069

Parsimonious Model for Combined Sewer Overflow Pollution, 646

Practical Melting Forecasting of Artificial Snow Made from Treated Wastewater, 173

Sorption of Statin Pharmaceuticals to Wastewater-Treatment Biosolids, Terrestrial Soils, and Freshwater Sediment, 638

Study on Pb and PAHs Emission Levels of Heavy Metals- and PAHs-Contaminated Soil during Thermal Treatment Process, 621

Pollution

Developing and Teaching a Course in "Applied Sustainability and Public Health in Civil Engineering Design" at Queen's University, Kingston, Canada, 1601

Observation on Particulate Matter over a Period of 3 Years at Kaikhali (22.022°N and 88.614°E) inside a Special Mangrove Ecosystem: Sundarbans, 622

Polyethylene

Compressive Creep of Virgin HDPE Using Equivalent Strain Energy Density Method, 1488

Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

Effect of Low-Density Polyethylene on Fracture Toughness of Asphalt Concrete Mixtures, 1457

Effectiveness of Viscoelastic Models for Prediction of Tensile Axial Strains during Cyclic Loading of High-Density Polyethylene Pipe, 1570

Effects of Thickness on the Aging of HDPE Geomembranes, 803

Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128

Parametric Dependency and Trends of HDD Pull Loads, 1569

Polymer

Characterization of Organic Surfactant on Montmorillonite Nanoclay to Be Used in Bitumen, 1431

Comparison of Mechanical Properties for Polymer Concrete with Different Types of Filler, 1419

Compressive Creep of Virgin HDPE Using Equivalent Strain Energy Density Method, 1488

Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

Effect of Wrinkles on the Circumferential Strength of a Cast-in-Place Composite Polymer Liner Used in Retrofitting Pressure Pipes, 1492

Nanoscale Evaluation of Moisture Damage in Polymer Modified Asphalts, 1421

Proportioning Design and Mechanical Properties Research of Polypropylene Fiber and Polymer Emulsion Reinforced Cement Mortar, 1364

Time-Dependent Behavior of Laminated Glass, 1383

Polynomials

Statistical Moments of Polynomial Dimensional Decomposition, 549

Polystyrene

Below-Ground Performance of Rigid Polystyrene Foam Insulation: Review of Effective Thermal Resistivity Values Used in ASCE Standard 32-01—Design and Construction of Frost-Protected Shallow Foundations, 170

Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532

Numerical Modeling of Geofoam Embankments, 802

Polyurethane

Full-Scale Field Testing for Verification of Mechanical Properties of Polyurethane Foams for Use as Backfill in PCC Repairs, 1367

Ponds

Effect of Storm-Water Wetlands and Wet Ponds on Runoff Temperature in Trout Sensitive Waters, 1273

Investigation of Flow through Orifices in Riser Pipes, 1238

Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222

Pore pressure

Analysis of Soil Disturbance Associated with Mandrel-Driven Prefabricated Vertical Drains Using an Elliptical Cavity Expansion Theory, 17

Behavior of Concrete in Water Subjected to Dynamic Triaxial Compression, 496

Consolidation Behavior of Soils Subjected to Asymmetric Initial Excess Pore Pressure Distributions, 31

Deformation and Cracking of Seepage Barriers in Dams due to Changes in the Pore Pressure Regime, 776

Dynamic Numerical Analysis of Antimoisture-Damage Mechanism of Permeable Pavement Base, 36

Evolution of the Pore-Pressure Field around a Moving Conical Penetrometer of Finite Size, 485

Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Pore size distribution

Capillary Shape: Influence on Water Transport within Unsaturated Alkali Activated Slag Concrete, 1369

Effect of Pore-Size Distribution on Shrinkage of Concretes, 1399

Pore water

Evaluation of a Dielectric Sensor for Measurement of Soil-Water Electrical Conductivity, 1261

Graphical Solutions for Hillslopes: Discharge, Head, and Velocity Diagrams, 1263

Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905

Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Poroelasticity

Comparison between Coupled and Uncoupled Consolidation Analysis of a Rigid Sphere in a Porous Elastic Infinite Space, 564

Vertical Vibrations of a Rigid Foundation Embedded in a Poroelastic Half Space, 497

Porosity

Algorithm to Generate a Discrete Element Specimen with Predefined Properties, 20

Application of Results of Nondestructive Testing Methods in the Investigation of Microstructure of Refractory Concretes, 1439

Effective Porosity Measurement of a Marine Clay, 689
Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116
Microporosity Structure of Coarse Granular Soils, 912
Permeability Reduction in Pervious Concretes due to Clogging: Experiments and Modeling, 1424
Proposed Behavioral Model for Deicer Scaling Resistance of Slag Cement Concrete, 1380
Simplified versus Detailed Two-Dimensional Approaches to Transient Flow Modeling in Urban Areas, 970
Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916

Porous media

Analytical Solutions for Contaminant Diffusion in Double-Layered Porous Media, 923
Assessment of Subballast Filtration under Cyclic Loading, 921
Capillary Shape: Influence on Water Transport within Unsaturated Alkali Activated Slag Concrete, 1369
Drainability of Permeable Friction Course Mixtures, 1403
Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393
Effect of Rejuvenation Methods on the Infiltration Rates of Pervious Concrete Pavements, 1098
Effective Porosity Measurement of a Marine Clay, 689
Evaluation of a Dielectric Sensor for Measurement of Soil-Water Electrical Conductivity, 1261
Extended Boussinesq Equations for Water-Wave Propagation in Porous Media, 521
Fractal Dimensions of Fracture Surfaces, 476
Fractal Dimensions of Fracture Surfaces
Installation and Axial Pullout of Suction Caissons: Numerical Modeling, 886
Kaolinite and Lead in Saturated Porous Media: Facilitated and Impeded Transport, 756
Plane-Strain Propagation of a Fluid-Driven Crack in a Permeable Rock with Fracture Toughness, 574
Potential for Clay Clogging of Pervious Concrete under Extreme Conditions, 1063
Side-by-Side Comparison of Nitrogen Species Removal for Four Types of Permeable Pavement and Standard Asphalt in Eastern North Carolina, 1107
Stone-on-Stone Contact of Permeable Friction Course Mixtures, 1470
Three-Dimensional Semianalytical Solutions of Groundwater Flow to a Well in Fractured Wedge-Shaped Aquifers, 1153
Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103
Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916

Porous media flow

External Iterative Coupling Strategy for Surface-Subsurface Flow Calculations in Surface Irrigation, 1276

Portland cement

Addressing Sulfate-Induced Heave in Lime Treated Soils, 784
Determining Thermal Conductivity of Paving Materials Using Cylindrical Sample Geometry, 1360
Development of Fiber-Reinforced Cement-Based Composite Sheets for Structural Retrofit, 1405
Investigation of Flexural Properties of Cement-Stabilized Macadam Reinforced with Polypropylene Fiber, 1489
Ultrafine Cement in Pressure Grouting, 2292

Post tensioning

Experimental Evaluation of Posttensioned Precast Concrete Coupling Beams, 1713
Parametric Study of Posttensioned Inverted-T Bridge System for Improved Durability and Increased Span-to-Depth Ratio, 164
Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451
Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238

Postbuckling

Analytical and Numerical Models of Postbuckling of Orthotropic Symmetric Plates, 589
Hygrothermoelastic Postbuckling Response of Laminated Composite Plates, 39
Nonlinear Thermoelastic Buckling of Pin-Ended Shallow Arches under Temperature Gradient, 553

Power plants

Combined Cycle Power Augmentation by Overspray Inlet Fogging, 448
Data Consolidation from Hydroelectric Plants, 456
Influence of Mechanical Draft Tube Fish Barrier on the Hydraulic Thrust of Small Francis Turbines, 1038
Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes, 1389
Modeling Evapotranspiration Effects on Air Flowing in a Small Glass Roofed Tunnel, 1236
Numerical Modeling for Hydraulic Resonance in Hydropower Systems Using Impulse Response, 1039

Power spectral density

Laboratory Measurements on Turbulent Pressure Fluctuations in and above Gravel Beds, 1021

Precast concrete

Concept and Finite-Element Modeling of New Steel Shear Connectors for Self-Centering Wall Systems, 481
Differences between Calculated and Measured Long-Term Deflections in a Prestressed Concrete Girder Bridge, 1557
Exchange Model and Exchange Object Concepts for Implementation of National BIM Standards, 264
Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610
Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116
Large-Scale Experimental Study of Precast Segmental Unbonded Posttensioned Concrete Bridge Columns for Seismic Regions, 1632
Shear Characteristics and Design for High-Strength Self-Consolidating Concrete, 1705
Shear Strength of a Lightweight Self-Consolidating Concrete Bridge Girder, 152

Precipitation

Application of a Distributed Hydrologic Model to the November 17, 2004, Flood of Bull Creek Watershed, Austin, Texas, 1120

Application of Partial Least-Squares Regression in Seasonal Streamflow Forecasting, 1116
Empirical Relationship between Large Dams and the Alteration in Extreme Precipitation, 2087
Ferrous Salt Demand for Sulfide Control in Rising Main Sewers: Tests on a Laboratory-Scale Sewer System, 742
Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086
Low Flow Scaling with Respect to Drainage Area and Precipitation in Northern Iran, 1077
Modeling Particle-Size Distribution Dynamics during Precipitative Softening, 610
Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174

Predictions

Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312
Application of Hansen Solubility Parameters to Predict Compatibility of SBS-Modified Bitumen, 1428
Artificial Neural Network Model of Bridge Deterioration, 1556
Axial Load Capacity of Concrete-Filled FRP Tube Columns: Experimental versus Theoretical Predictions, 199
Bridge Scour: Prediction, Modeling, Monitoring, and Countermeasures—Review, 2142
CBR Revision Model for Improving Cost Prediction Accuracy in Multifamily Housing Projects, 1338
Class A Prediction of the Behavior of Soft Estuarine Soil Foundation Stabilized by Short Vertical Drains beneath a Rail Track, 841
Comparative Study of SVMs and ANNs in Aquifer Water Level Prediction, 299
Contemporaneous Time Series and Forecasting Methodologies for Predicting Short-Term Productivity, 418
Cross-Validation of Short-Term Productivity Forecasting Methodologies, 417
Deflection Prediction for FRP-Strengthened Concrete Beams, 200
Deterioration Forecasting Model with Multistage Weibull Hazard Functions, 1192
Discussion of Criteria for Prioritization of Predictive Maintenance of Building Façades: Survey of 30 Experts, 1529
Dynamic Analysis of Gap Closing and Contact in the Mixed Lagrangian Framework: Toward Progressive Collapse Prediction, 555
Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095
Efficient Model Correction Method with Modal Measurement, 468
Experimental Estimation of the Relative Deterioration of Surface Maintenance Treatments, 1788
Generalization of ET_o ANN Models through Data Supplanting, 1218
Genetic Programming to Predict River Pipeline Scour, 1577
Groundwater Level Prediction Using SOM-RBFN Multisite Model, 1117
Monte–Carlo Based Method for Predicting Extreme Value Statistics of Uncertain Structures, 605
New Approach for Predicting Flow Bifurcation at Right-Angled Open-Channel Junction, 1010
Precedence-Preserving GAs Operators for Scheduling Problems with Activities' Start Times Encoding, 293
Predicting Peak Outflow from Breached Embankment Dams, 1090
Prediction of Extreme Response Statistics of Narrow-Band Random Vibrations, 488
Prediction of Life-Cycle Expenditure for Different Categories of Council Buildings, 1551
Prediction of Long-Term Municipal Solid Waste Landfill Settlement Using Constitutive Model, 2110
Prediction of Permanent Deformations in Pavements Using a High-Cycle Accumulation Model, 845
Prediction System for Change Management in Construction Project, 380
Research on a Short-Range Prediction Model for Track Irregularity over Small Track Lengths, 1905
Shakedown Approaches to Rut Depth Prediction in Low-Volume Roads, 600
Simple Three-Step Analytical Scheme for Prediction of Elastic Moduli of Hardened Cement Paste, 1478
Speed Prediction Models for Multilane Highways: Simultaneous Equations Approach, 1880
Stress-Prediction Model for Airport Pavements with Jointed Concrete Slabs, 1859
Techniques for Predicting Cracking Pattern of Masonry Wallet Using Artificial Neural Networks and Cellular Automata, 277
Toward Monte Carlo Simulation-Based Mechanistic-Empirical Prediction of Asphalt Pavement Performance, 1860
Using Soft Computing to Analyze Inspection Results for Bridge Evaluation and Management, 135

Prefabrication

Assessing the Environmental Impacts of a Lean Supply System: Case Study of High-Rise Condominium Construction in Korea, 92
Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

Preservation

Preservation of Watershed Regime for Low-Impact Development through Detention, 1056

Pressure

Face Stability Analysis of Circular Tunnels Driven by a Pressurized Shield, 794
Spatiotemporal Characteristics of Near-Bed Pressure Gradients on a Barred Beach, 2059

Pressure distribution

Manifold Flow in Pressure-Distribution Systems, 1576

Pressure pipes

Effect of Wrinkles on the Circumferential Strength of a Cast-in-Place Composite Polymer Liner Used in Retrofitting Pressure Pipes, 1492
Manifold Flow in Pressure-Distribution Systems, 1576

Pressurized flow

Junction and Drop-Shaft Boundary Conditions for Modeling Free-Surface, Pressurized, and Mixed Free-Surface Pressurized Transient Flows, 1015

Prestressed concrete

Distribution Factors for Short-Haul Vehicular Loads on Prestressed Concrete Open Box Beam (U-Beam) Bridges, 2140
Dynamic Crack Propagations in Prestressed Concrete Sleepers in Railway Track Systems Subjected to Severe Impact Loads, 1682

Experimental Evaluation of Posttensioned Precast Concrete Coupling Beams, 1713
Experimental Performance of Full-Depth Precast, Prestressed Concrete Overhang, Bridge Deck Panels, 142
Finite-Element Model for Pretensioned Prestressed Concrete Girders, 1648
Flexural Response of Concrete Beams Prestressed with AFRP Tendons: Numerical Investigation, 241
Forensic Examination of a Noncomposite Adjacent Precast Prestressed Concrete Box Beam Bridge, 133
FRP Strengthening of Full-Scale PC Girders, 228
Large-Scale Experimental Study of Precast Segmental Unbonded Posttensioned Concrete Bridge Columns for Seismic Regions, 1632
Linear Elastic Fracture Mechanics Pullout Analyses of Headed Anchors in Stressed Concrete, 533
Shear Characteristics and Design for High-Strength Self-Consolidating Concrete, 1705
Shear Strength of a Lightweight Self-Consolidating Concrete Bridge Girder, 152
Structural Reliability of Prestressed UHPC Flexure Models for Bridge Girders, 100

Prestressing
Behavior of Prestressed Steel Beams, 1719
Development of Mechanical Anchor for CFRP Tendons Using Integrated Sleeve, 216
Displacement Method for the Long-Term Analysis of Steel-Concrete Beams with Flexible Connection, 1633
Effective Repair for Corrosion Control Using FRP Wraps, 215
Fatigue Performance of Tension Steel Plates Strengthened with Prestressed CFRP Laminates, 237
Force Finding of Tensegrity Systems Using Simulated Annealing Algorithm, 1709
Lateral Seismic Performance of Multipanel Precast Hollowcore Walls, 1686
Parametric Study of Posttensioned Inverted-T Bridge System for Improved Durability and Increased Span-to-Depth Ratio, 164
Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451
Stresses in External and Internal Unbonded Tendons: Unified Methodology and Design Equations, 1712

Pricing
Below-Average Bidding Method, 408
Empirical Study of the Risks and Difficulties in Implementing Guaranteed Maximum Price and Target Cost Contracts in Construction, 364
Estimation of a Sensitivity-Based Metric for Detecting Market Power, 450
Impacts of Transportation External Cost Pricing and Transit Fare Reductions on Household Mode/Route Choices and Environmental Improvements, 1954
Price Competitive Alliance Projects: Identification of Success Factors for Public Clients, 409
Residential Water Demand under Alternative Rate Structures: Simulation Approach, 1999
Single-Objective versus Multiobjective Optimization of Water Distribution Systems Accounting for Greenhouse Gas Emissions by Carbon Pricing, 2015
Travelers' Response to Value Pricing: Application of Departure Time Choices to TRANSIMS, 1875

Private sector
Critical Success Factors for PPPs in Infrastructure Developments: Chinese Perspective, 363
Determinants of Efficient Risk Allocation in Privately Financed Public Infrastructure Projects in Australia, 328
Developing a Fuzzy Risk Allocation Model for PPP Projects in China, 404
Enabling Development of the Transportation Public-Private Partnership Market in the United States, 354
Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326
Potential Obstacles to Successful Implementation of Public-Private Partnerships in Beijing and the Hong Kong Special Administrative Region, 1320
PPP Experiences in Indian Cities: Barriers, Enablers, and the Way Forward, 356

Probability
Aging Considerations in the Development of Time-Dependent Seismic Fragility Curves, 1753
Backward Probabilistic Modeling to Identify Contaminant Sources in Water Distribution Systems, 2018
Bayesian Network Enhanced with Structural Reliability Methods: Methodology, 583
Comparative Study of Static and Dynamic Falling Weight Deflectometer Back-Calculations Using Probabilistic Approach, 1811
Dynamic Performance Simulation of Long-Span Bridge under Combined Loads of Stochastic Traffic and Wind, 115
Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783
Estimation of Probabilistic Extreme Wind Load Effects: Combination of Aerodynamic and Wind Climate Data, 532
Flax Fiber-Reinforced Glued-Laminated Timber in Tension Perpendicular to the Grain: Experimental Study and Probabilistic Analysis, 1436
Hydraulic Deterioration Models for Storm-Water Drainage Pipes: Ordered Probit versus Probabilistic Neural Network, 275
Impact of Different Earthquake Types on the Statistics of Ductility Demand, 1684
Low Flow Scaling with Respect to Drainage Area and Precipitation in Northern Iran, 1077
Markov and Neural Network Models for Prediction of Structural Deterioration of Storm-Water Pipe Assets, 1180
Method of Up-Slope Mitigation Priority for Alishan Mountain Road in Taiwan, 1533
Nearest Neighbor Probabilistic Model for Aluminum Polycrystals, 538
Overtopping Probability Constrained Optimal Design of Composite Channels Using Swarm Intelligence Technique, 1259
Predictive and Diagnostic Load Rating Model of a Prestressed Concrete Bridge, 132
Probabilistic Analysis of Coupled Soil Consolidation, 814
Probabilistic Analysis of Soil-Water Characteristic Curves, 817
Probabilistic Analysis of Transient Design for Water Supply Systems, 2028
Probabilistic Approach for Budgeting in Portfolio of Projects, 350

Probabilistic Approach to Estimation of Urban Storm-Water TMDLs: Regulated Catchment, 1270
Probabilistic Assessment of Slope Stability That Considers the Spatial Variability of Soil Properties, 870
Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451
Probabilistic Push-Over Analysis of Structural and Soil-Structure Systems, 1738
Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593
Probability of Failure Analysis due to Internal Corrosion in Cast-Iron Pipes, 1170
Safety Assessment of a Steel Frame Using LRFD and SBRA Methods, 2136
Seismic Response and Fragility of Deteriorated Reinforced Concrete Bridges, 1733
Structural System Parameter Selection Based on Collapse Potential of Buildings in Earthquakes, 1699
Structural Uncertainty Effect on Classical Wing Flutter Characteristics, 74
Variability of the Compressive Strength of Parallel Strand Lumber, 499
Wave Overtopping and Damage Progression of Stone Armor Layer, 2052

Probability distribution

Assessment of Flooding Risk to Cultural Heritage in Historic Sites, 1539
Deterioration Forecasting Model with Multistage Weibull Hazard Functions, 1192
Probability Analysis of Hydrological Loads for the Design of Flood Control Systems Using Copulas, 1092
Statistical Properties of Strain and Rotation Tensors in Geodetic Network, 1778
Using GPS Data to Gain Insight into Public Transport Travel Time Variability, 1855

Probe instruments

Assessing Reliability and Potentiality of Nonnuclear Portable Devices for Asphalt Mixture Density Measurement, 1442
Characterization of the Residual Stress State in Commercially Fully Toughened Glass, 1359
Characterization of Wireless Smart Sensor Performance, 601
Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706
Critical Assessment of Interstory Drift Measurements, 1760
Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502
Detection of Vehicles with Studded Tires Using Acoustic Emission Sensors Mounted to Highway Bridges, 1839
Embedded Cement-Based Piezoelectric Sensors for Acoustic Emission Detection in Concrete, 1494
Evaluation of a Dielectric Sensor for Measurement of Soil-Water Electrical Conductivity, 1261
Influence of Vertical Sensor Placement on Data Collection Efficiency from Bluetooth MAC Address Collection Devices, 1907
In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study, 150
Integrating Location Models with Bayesian Analysis to Inform Decision Making, 1980
Large Eddy Simulation of Flow and Tracer Transport in Multichamber Ozone Contactors, 611
Optimal Design of Sensor Placement in Water Distribution Networks, 1959
Review of Sensor Placement Strategies for Contamination Warning Systems in Drinking Water Distribution Systems, 2021
Sensor Network for Structural Health Monitoring of a Highway Bridge, 263
Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220
SLOTS: Effective Algorithm for Sensor Placement in Water Distribution Systems, 2022

Procurement

Contractor Performance Evaluation for the Best Value of Superpave Projects, 374
Critical Success Factors for PPPs in Infrastructure Developments: Chinese Perspective, 363
Enabling Development of the Transportation Public-Private Partnership Market in the United States, 354
Facility Maintenance Performance Perspective to Target Strategic Organizational Objectives, 1513
Legal Issues of Integrated Network for Construction and Real Estate Sector, 1313
Potential Obstacles to Successful Implementation of Public-Private Partnerships in Beijing and the Hong Kong Special Administrative Region, 1320

Production management

Counterfactual Analysis of Sustainable Project Delivery Processes, 373
Critical Concerns of Production Control System on Projects with Labor Constraints: Lessons from a Residential Case Study, 1332
Empire State Building Project: Archetype of "Mass Construction", 384

Productivity

Case Law and Variations in Cumulative Impact Productivity Claims, 397
Benefits and Barriers of Construction Project Monitoring Using High-Resolution Automated Cameras, 377
Computer Vision-Based Video Interpretation Model for Automated Productivity Analysis of Construction Operations, 284
Contemporaneous Time Series and Forecasting Methodologies for Predicting Short-Term Productivity, 418
Critical Investigation into the Applicability of the Learning Curve Theory to Rebar Fixing Labor Productivity, 441
Cross-Validation of Short-Term Productivity Forecasting Methodologies, 417
Farmers' Adaptation and Regional Land-Use Changes in Irrigation Systems under Fluctuating Water Supply, South India, 1267
Impact of Resources and Strategies on Construction Company Performance, 1318
Implementing Observational Research Methods to Study Team Performance in Construction Management, 322
Improved Baseline Productivity Analysis Technique, 351
Improved Baseline Productivity Analysis Technique

Integrated Simulation System for Construction Operation and Project Scheduling, 313

Quantification of Losses of Labor Efficiencies: Innovations in and Improvements to the Measured Mile, 1302

Ranking of the Factors Affecting Productivity of Microtunneling Projects, 1566

Sleep Deprivation and Its Consequences in Construction Workers, 422

Professional development

Closing the Gender Gap, 2199

"If These Women Can Do It, I Can Do It, Too": Building Women Engineering Leaders through Graduate Peer Mentoring, 2076

Impact of the Leadership in Energy and Environmental Design Accredited Professional Credential on Design Professionals, 1594

Pavement Interactive: Pavement Knowledge Transfer with Web 2.0, 1914

Professional personnel

Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry, 1582

Professional practice

The Burj Khalifa Triumphs: Engineering an Idea: The Realization Of the Burj Khalifa, 2169

Engineering in the Service of Law, 1301

Factors Affecting Construction Project Outcomes: Case Study of Vietnam, 1596

Globalization: Conundrums and Paradoxes for Civil Engineering, 2063

Impact of the Leadership in Energy and Environmental Design Accredited Professional Credential on Design Professionals, 1594

Principles and Practice of Engineering, 2271

Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry, 1582

Professional services

Learning Applications in the Architectural Engineering Educational Setting, 90

Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry, 1582

Profits

Profit Optimization for Multiproject Scheduling Problems Considering Cash Flow, 440

Progressive collapse

Building Robustness Research during World War II, 1549

Disproportionate Collapse: Terminology and Procedures, 1548

Dynamic Analysis of Gap Closing and Contact in the Mixed Lagrangian Framework: Toward Progressive Collapse Prediction, 555

Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames, 1655

Parallel Axial-Flexural Hinge Model for Nonlinear Dynamic Progressive Collapse Analysis of Welded Steel Moment Frames, 1623

Progressive Collapse Mechanisms of Brittle and Ductile Framed Structures, 556

Progressive Collapse Resistance of Steel-Concrete Composite Floors, 1724

Project delivery

Counterfactual Analysis of Sustainable Project Delivery Processes, 373

Enabling Development of the Transportation Public-Private Partnership Market in the United States, 354

Evaluation of Risk Factors Leading to Cost Overrun in Delivery of Highway Construction Projects, 367

Integrated Project Delivery Case Study: Guidelines for Drafting Partnering Contract, 1316

Longitudinal Study of Innovative Contracting Practices in State Departments of Transportation, 1303

Owners Respond: Preferences for Task Performance, Delivery Systems, and Quality Management, 343

Peer-to-Peer-Based Publish/Subscribe Architecture for Advanced Infrastructure Systems, 268

Piloting Evaluation Metrics for Sustainable High-Performance Building Project Delivery, 402

Selecting Appropriate Project Delivery System: Fuzzy Approach with Risk Analysis, 407

Selecting Infrastructure Delivery Modalities: No Time for Ideology or Semantics, 355

Statistical Analysis on the Cost and Duration of Public Building Projects, 1327

Understanding Construction Industry Experience and Attitudes toward Integrated Project Delivery, 396

Project management

Adoption and Use of Interorganizational ICT in a Construction Project, 414

Automated Generation of Customized Field Data Collection Templates to Support Information Needs of Cost Estimators, 274

Causes, Effects, Benefits, and Remedies of Change Orders on Public Construction Projects in Oman, 375

Clearing the Utilities on Time and Under Budget, 2064

Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm, 330

Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm

Critical Path Segments Scheduling Technique, 421

Critical Review of Collaborative Working in Construction Projects: Business Environment and Human Behaviors, 1335

Determinants of Efficient Risk Allocation in Privately Financed Public Infrastructure Projects in Australia, 328

Developing an ARIS-House-Based Method from Existing Information Systems to Project-Based Enterprise Resource Planning for General Contractor, 334

Domain Ontology for Processes in Infrastructure and Construction, 387

Dynamic Knowledge-Based Process Integration Portal for Collaborative Construction, 346

Effect of Preconstruction Planning Effort on Sheet Metal Project Performance, 338

Effectiveness of ICT for Construction Information Exchange among Multidisciplinary Project Teams, 295

Employing the Net Present Value-Consistent IRR Methods for PFI Contracts, 395

Exploring the Potential for Predicting Project Dispute Resolution Satisfaction Using Logistic Regression, 365

Factors Affecting Construction Project Outcomes: Case Study of Vietnam, 1596
Global Dimension of Robust Project Network Design, 358
Influence of Highway Project Characteristics on Contract Type Selection: Empirical Assessment, 1196
Integrated Project Delivery Case Study: Guidelines for Drafting Partnering Contract, 1316
Management Thinking in the Earned Value Method System and the Last Planner System, 1337
Multiobjective Optimization of Time-Cost Trade-Off Using Harmony Search, 385
Object Model Framework for Interface Modeling and IT-Oriented Interface Management, 333
Performance of MBE/DBE/WBE Construction Firms in Transportation Projects, 390
Personal Construct-Based Factors Affecting Interpersonal Trust in a Project Design Team, 337
Piloting Evaluation Metrics for Sustainable High-Performance Building Project Delivery, 402
Political, Economic, and Legal Risks Faced in International Projects: Case Study of Vietnam, 1597
Practical Application of SWOT Analysis in the Management of a Construction Project, 2070
Precedence-Preserving GAs Operators for Scheduling Problems with Activities' Start Times Encoding, 293
Prediction System for Change Management in Construction Project, 380
Probabilistic Approach for Budgeting in Portfolio of Projects, 350
Project Administration for Design-Build Contract, 2272
Project Compression with Nonlinear Cost Functions, 340
Project Management and Green Buildings: Lessons from the Rating Systems, 1588
Removal of Redundant Relationships in an AON Project Network for Evaluating Schedule Complexity, 392
Roadway Reinvention, 2197
Three-Stage Least-Squares Analysis of Time and Cost Overruns in Construction Contracts, 434
Understanding and Managing Three-Dimensional/Four-Dimensional Model Implementations at the Project Team Level, 389
Washington State's I-405 Project: Women in Industry Leadership, 2073
Web-Based Construction Project Specification System, 281

Protective structures

Explosion Performance of a Ball Powder Production Facility, 1528
Geotechnical Problems of Cultural Heritage due to Floods, 1541

Pseudodynamic method

Explicit Pseudodynamic Algorithm with Improved Stability Properties, 519

Public health

Developing and Teaching a Course in "Applied Sustainability and Public Health in Civil Engineering Design" at Queen's University, Kingston, Canada, 1601
Extreme Impact Contamination Events Sampling for Water Distribution Systems Security, 1966
Health Impacts of Urban Development and Transportation Systems, 1940
Health-Risk-Based Remedial Alternatives for Contaminated Aquifer Management, 2101
Promoting Sustainability through Transportation Infrastructure? Innovation and Inertia in the Kansas City Metropolitan Area, 1950

Public information programs

Outreach to K–12 Teachers: Workshop in Instrumentation, Sensors, and Engineering, 1592

Public participation

Simplest Way to Reach the Most Complicated Goal: "In the Urban Planning, Questions Are Ours and Answers Are the Natives's", 1934

Public policy

Special Report: The Infrastructure Roundtables: Concluding Thoughts—How Do We Spread the Message About the Need to Improve the Nation's Infrastructure? How Can Civil Engineers Best Engage the Public and Policy Makers?, 2186

Public safety

Methodology for Bayesian Belief Network Development to Facilitate Compliance with Water Quality Regulations, 1168
Monitoring System to Provide Assurance for Maintenance of Structures, 2128

Public transportation

Bus-to-Depot Allocation: Models and Decision Support System, 1852
ICCTP 2010, 2257
Measuring Transfer Efficiency of Urban Public Transportation Terminals by Data Envelopment Analysis, 1951
Microsimulation Study of the Effect of Exclusive Bus Lanes on Heterogeneous Traffic Flow, 1922
Multiobjective Transit Passenger Information System Design Using GIS, 1920
Single-Stage Integer Programming Model for Long-Term Transit Fleet Resource Allocation, 1819
Using GPS Data to Gain Insight into Public Transport Travel Time Variability, 1855
Willingness to Shift to Walking or Bicycling to Access Suburban Rail: Case Study of Mumbai, India, 1917

Pullout

Direct Tension Pullout Bond Test: Experimental Results, 1680
Effect of Fastener-Deck Strength on the Wind-Uplift Performance of Mechanically Attached Roofing Assemblies, 2131
Full-Scale Impact Test of Four Traffic Barriers on Top of an Instrumented MSE Wall, 815
Installation and Axial Pullout of Suction Caissons: Numerical Modeling, 886
Pullout Behavior of Steel Fibers in Self-Compacting Concrete, 1340
Pullout Strength Models for FRP Anchors in Uncracked Concrete, 217

Pultrusion

LRFD Factors for Pultruded Wide-Flange Columns, 1663
Prediction of Net-Tension Strength for Multirow Bolted Connections of Pultruded Material Using the Hart-Smith Semiempirical Modeling Approach, 186

Pumping stations
Generalized Method for Storm-Water Pumping Station Design, 1146

Pumping tests
Distribution of Stream Depletion, 959
Simple Method for Quick Estimation of Leaky-Aquifer Parameters, 1217

Pumps
Calibration and Optimization of the Pumping and Disinfection of a Real Water Supply System, 2008
Design of Pumped Water Distribution Networks with Storage, 1971
Diagnostic Curves for Identifying Leaky Aquifer Parameters with or without Aquitard Storage, 1204
Energy Variability and Produced Water: Two Challenges, One Synergistic Management Approach Using Pumped Hydroelectric Energy Storage, 447
Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231
Multiobjective Groundwater Remediation System Design Using Coupled Finite-Element Model and Nondominated Sorting Genetic Algorithm II, 1091
Neutral Search Technique for Short-Term Pump Schedule Optimization, 1972
Optimization of Underground Water Pumping, 1246
Ultrafine Cement in Pressure Grouting, 2292

Quality control
Accuracy of Ground-Penetrating Radar for Concrete Pavement Thickness Measurement, 1558
Anisotropy in the Spatial Distribution of Roller-Measured Soil Stiffness, 25
Assessment of the Use of Hot-Mix Recycled Asphalt Concrete in Plant, 1913
Clarifying the Relationship between Quality of Global Positioning System Data and Precision of Positioning, 1771
Contractor Performance Evaluation for the Best Value of Superpave Projects, 374
Critical Concerns of Production Control System on Projects with Labor Constraints: Lessons from a Residential Case Study, 1332
Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532
Empiricist Framework for TQM Implementation in Construction Companies, 1330
Extended Receiver Autonomous Integrity Monitoring (eRAIM) for GNSS/INS Integration, 1767
Geostatistical Analysis for Spatially Referenced Roller-Integrated Compaction Measurements, 853
Innovation Diffusion Modeling in the Construction Industry, 347
Interrater Reliability of Manual Pavement Distress Evaluations, 1807
Occupational Licensing of Building Trades: Case of Western Australia, 1603
Owners Respond: Preferences for Task Performance, Delivery Systems, and Quality Management, 343
Quality Assessment and Quality Control of Deep Soil Mixing Construction for Stabilizing Expansive Subsoils, 785
Quality Control of Soil Water Data in Applied Climate Information System—Case Study in Nebraska, 1076
Rational Three-Step Method for Optimizing Value of Civil Engineering Research, 1322

Quantitative analysis
Methodology for Conducting Discrete-Event Simulation Studies in Construction Engineering and Management, 315
Quantitative Methods for Design-Build Team Selection, 405
Quantitative Risk Assessment of Cut-Slope Projects under Construction, 933
Rational Three-Step Method for Optimizing Value of Civil Engineering Research, 1322

Questionnaires
Causes of Delay in the Planning and Design Phases for Construction Projects, 84
Ranking of the Factors Affecting Productivity of Microtunneling Projects, 1566
SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractors for Bonding, 435

Radar
Accuracy of Ground-Penetrating Radar for Concrete Pavement Thickness Measurement, 1558
Data Analysis Techniques for GPR Used for Assessing Railroad Ballast in High Radio-Frequency Environment, 1830
Inspection and Condition Assessment Using Ground Penetrating Radar, 793
Modeling Radar Rainfall Estimation Uncertainties: Random Error Model, 1084
Nondestructive Testing of GFRP Bridge Decks Using Ground Penetrating Radar and Infrared Thermography, 131

Radiation
Femtotechnology: Design of the Strongest AB Matter for Aerospace, 69
Modeling Evaporative Water Loss from the On-Farm Reservoir with Biological Shading, 1111

Radioactive wastes
Impact of Heterogeneity on Gamma-Spectrometry Data at Nondestructive Assay of Radioactive Waste, 2117

Radiography
Effect of Fine Particle Migration on the Small-Strain Stiffness of Unsaturated Soils, 834

Raft foundations
Experimental Study of Eccentrically Loaded Raft with Connected and Unconnected Short Piles, 909
Practical Subgrade Model for Improved Soil-Structure Interaction Analysis: Software Implementation, 2157
Theoretical Study on Pile Length Optimization of Pile Groups and Piled Rafts, 805

Rail transportation
Determination and Optimization of the Maintenance Frequencies in the Overhead Contact Line System, 1893
Formulation and Solution Approaches to the Rail Maintenance Production Gang Scheduling Problem, 1863
Impacts of Transportation External Cost Pricing and Transit Fare Reductions on Household Mode/Route Choices and Environmental Improvements, 1954
Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. I: Theory, 1864

Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. II: Applications, 1865

Simulation-Based Analysis of Train Controls under Various Track Alignments, 1890

Transit-Oriented Land Planning Model Considering Sustainability of Mass Rail Transit, 1944

Willingness to Shift to Walking or Bicycling to Access Suburban Rail: Case Study of Mumbai, India, 1917

Railroad Ballast

Assessment of Subballast Filtration under Cyclic Loading, 921

Ballistic Walking Design via Impulsive Control, 54

Data Analysis Techniques for GPR Used for Assessing Railroad Ballast in High Radio-Frequency Environment, 1830

Determination of the Transverse Resistance Characteristics in Railway Track, 1902

Dynamic Crack Propagations in Prestressed Concrete Sleepers in Railway Track Systems Subjected to Severe Impact Loads, 1682

Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26

Field Assessment of the Performance of a Ballasted Rail Track with and without Geosynthetics, 863

Loads on Track, Ballast Fouling, and Life Cycle under Dynamic Loading in Railways, 1904

Railroad tracks

Class A Prediction of the Behavior of Soft Estuarine Soil Foundation Stabilized by Short Vertical Drains beneath a Rail Track, 841

Data Analysis Techniques for GPR Used for Assessing Railroad Ballast in High Radio-Frequency Environment, 1830

Determination of the Transverse Resistance Characteristics in Railway Track, 1902

Development of Nonlinear Railway Track Model Applying Modified Plane Strain Technique, 1903

Development of Railway Track Geometry Indexes Based on Statistical Distribution of Geometry Data, 1862

Dynamic Crack Propagations in Prestressed Concrete Sleepers in Railway Track Systems Subjected to Severe Impact Loads, 1682

Field Assessment of the Performance of a Ballasted Rail Track with and without Geosynthetics, 863

Formulation and Solution Approaches to the Rail Maintenance Production Gang Scheduling Problem, 1863

Loads on Track, Ballast Fouling, and Life Cycle under Dynamic Loading in Railways, 1904

New Life for an Old Line, 2192

Research on a Short-Range Prediction Model for Track Irregularity over Small Track Lengths, 1905

Simulation-Based Analysis of Train Controls under Various Track Alignments, 1890

Thermal Interaction between Permafrost and the Qinghai-Tibet Railway, 175

Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176

Railroad trains

Aerodynamic Effects Caused by Trains Entering Tunnels, 1879

Experimental Study on the Stability of Railroad Silt Subgrade with Increasing Train Speed, 855

Rainfall

Assessing Rainfall Data Homogeneity and Estimating Missing Records in Mākaha Valley, O'ahu, Hawai'i, 1062

Bioengineering Techniques Associated with Soil Nailing Applied to Slope Stabilization and Erosion Control, 2082

Characterizing Physicochemical Quality of Storm-Water Runoff from an Urban Area in Calgary, Alberta, 745

Design Criteria of Urban Drainage Infrastructures under Climate Change, 1979

Diffusion Wave Model for Simulating Storm-Water Runoff on Highway Pavement Surfaces at Superelevation Transition, 1020

Evaluation of Surface Water Runoff from Fly Ash–Stabilized and Nonstabilized Soil Surfaces, 716

Experimental Study on the Impact of Rainfall on RCC Construction, 362

Field Infiltration Characteristics of Natural Rainfall in Compacted Roadside Slopes, 797

Local Polynomial–Based Flood Frequency Estimator for Mixed Population, 1123

Method of Up-Slope Mitigation Priority for Alishan Mountain Road in Taiwan, 1533

Methodology for Wind-Driven Rainwater Intrusion Fragilities for Light-Frame Wood Roof Systems, 1676

Modeling of Rainfall-Induced Shallow Landslides of the Flow-Type, 782

Modeling Radar Rainfall Estimation Uncertainties: Random Error Model, 1084

Modeling Techniques of Best Management Practices: Rain Barrels and Rain Gardens Using EPA SWMM-5, 1099

Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220

Theory-Based SCS-CN Method and Its Applications, 1159

Transport and Distribution of Particulate Matter Phosphorus Fractions in Rainfall-Runoff from Roadway Source Areas, 744

Volumetric Filtration of Rainfall Runoff. II: Event-Based and Interevent Nutrient Fate, 760

Watershed Management 2010, 2293

Rainfall duration

Generalized Method for Storm-Water Pumping Station Design, 1146

Short-Duration Rainfall Intensity Equations for Urban Drainage Design, 1257

Rainfall intensity

Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924

Generalized Method for Storm-Water Pumping Station Design, 1146

Short-Duration Rainfall Intensity Equations for Urban Drainage Design, 1257

Ramps

Block Ramp Design for Efficient Energy Dissipation, 446

How Lane Arrangements on Freeway Mainlines and Ramps Affect Safety of Freeways with Closely Spaced Entrance and Exit Ramps, 1854

Influence of Tailwater Depth and Pile Position on Scour Downstream of Block Ramps, 1212

Real-Time Crash Risk Reduction on Freeways Using Coordinated and Uncoordinated Ramp Metering Approaches, 1832

Random processes

Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477

Prediction of Extreme Response Statistics of Narrow-Band Random Vibrations, 488

Variability of the Compressive Strength of Parallel Strand Lumber, 499

Random waves

Asymmetry in Directional Spreading Function of Random Waves due to Refraction, 2030

Rapid transit systems

Comparative Analysis of Unconditional and Conditional Priority for Use at Isolated Signalized Intersections, 1906

Ratings

Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111

Interrater Reliability of Manual Pavement Distress Evaluations, 1807

Predictive and Diagnostic Load Rating Model of a Prestressed Concrete Bridge, 132

Proposal of an Integrated Index for Prioritization of Bridge Maintenance, 126

Rating Sustainability: Transportation Investments in Urban Corridors as a Case Study, 1937

Rayleigh waves

Effects of the Source on Wave Propagation in Pile Integrity Testing, 892

On a Possible Role of Rayleigh Surface Waves in Dynamic Slope Failures, 28

Reactors

Kinetics of Arsenite Oxidation by Chemoautotrophic *Thiomonas arsenivorans* Strain b6 in a Continuous Stirred Tank Reactor, 735

Performance of North American Bioreactor Landfills. I: Leachate Hydrology and Waste Settlement, 706

Performance of North American Bioreactor Landfills. II: Chemical and Biological Characteristics, 707

Removal of Trichlorobenzene from Flue Gas Using Complex Absorbent, 767

Swine Wastewater Treatment Using Submerged Biofilm SBR Process: Enhancement of Performance by Internal Circulation through Sand Filter, 679

Real estate properties

Air Temperature Distribution and the Influence of Sky View Factor in a Green Singapore Estate, 1946

Recharge basins

Analytical Study of Water Table Fluctuation in Unconfined Aquifers due to Varying Bed Slopes and Spatial Location of the Recharge Basin, 1147

Recirculation

Large Eddy Simulation of Flow and Tracer Transport in Multichamber Ozone Contactors, 611

Understanding the Mixing Pattern in an Anaerobic Expanded Granular Sludge Bed Reactor: Effect of Liquid Recirculation, 678

Reclamation

Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Reconstruction

Considering Attitudes in Strategic Negotiation over Brownfield Disputes, 1315

Optimizing Resource Utilization during the Recovery of Civil Infrastructure Systems, 1339

Reconstruction Method for Damage Detection in Beams Based on Natural Frequency and Antiresonant Frequency Measurements, 492

Upper Green River Basin (United States) Streamflow Reconstructions, 1113

Recreation

The Disney Story, 2166

High Rolling Steel, 2167

Recycling

Application of Shakedown Theory in Characterizing Traditional and Recycled Pavement Base Materials, 1813

Assessment of the Use of Hot-Mix Recycled Asphalt Concrete in Plant, 1913

Beneficial Use of Shredded Tires as Drainage Material in Cover Systems for Abandoned Landfills, 2100

Bioenergy and Biofuel from Biowastes and Biomass, 2228

Carbon Neutral Off-White Rice Husk Ash as a Partial White Cement Replacement, 1464

Characterization of the Interaction Effect of Crumb Rubber Modified Binders Using HP-GPC, 1356

Compaction Characteristics and Bearing Ratio of Pond Ash Stabilized with Lime and Phosphogypsum, 1378

Design Robustness of Local Water-Recycling Schemes, 2012

Effect of Forced Aeration and Mechanical Turning on Leachate Quantity and Quality from Glass Cullet Stockpiles, 708

Effect of Mixing Constituent toward Engineering Properties of POFA Cement-Based Aerated Concrete, 1372

Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116

Effects of Recycled Materials on Long-Term Performance of Cold In-Place Recycled Asphalt Roads, 1523

Evaluation of the Use of Reclaimed Asphalt Pavement in Airfield HMA Pavements, 1809

Experimental Evaluation of Strength Characteristics of Stabilized Dredged Soil, 1401

Influence of Recycled Asphalt Pavement on Fatigue Performance of Asphalt Concrete Base Courses, 1413

Investigating the Alkali-Silica Reaction of Recycled Glass Aggregates in Concrete Materials, 1480

Investigating the Effects of Curing Methods on the Compressive Strength of Bitublock, 1362

Long-Term Field Performance of Cold In-Place Recycled Roads in Iowa, 1522

Methodology for Estimating Optimum Reuse Time Span: Application to Reusable Computer Waste, 2114

Micromechanics of the Effects of Mixing Moisture on Foamed Asphalt Mix Properties, 1453

Recycled Red-Clay Ceramic Construction and Demolition Waste for Mortars Production, 1366

Service Distance and Ratio-Based Location-Allocation Models for Siting Recycling Depots, 662
Stabilized Dredged Material. I: Parametric Study, 875
Stabilized Dredged Material. II: Geomechanical Behavior, 876
Stabilized Dredged Material. III: Mineralogical Perspective, 877
Using Recycled Concrete Aggregates in New Zealand Ready-Mix Concrete Production, 1390

Reefs

Infragravity Wave Motions and Runup over Shallow Fringing Reefs, 2056
Wave and Flow Response to an Artificial Surf Reef: Laboratory Measurements, 973

Regional analysis

Regional Bivariate Frequency Analysis of Meteorological Droughts, 1154

Regional development

Does a Technology Incubator Work in the Regional Economy? Evidence from South Korea, 1947

Regression analysis

Average Treatment Effect for Modeling Maintenance Work, 1175
Comparison of Multivariate Regression and Artificial Neural Networks for Peak Urban Water-Demand Forecasting: Evaluation of Different ANN Learning Algorithms, 1130
Constitutive Models for Tuff Masonry under Uniaxial Compression, 1467
Evaluating Watershed Experiments through Recursive Residual Analysis, 1239
Experimental Investigation of the Axial Capacity of Inelastically Pretwisted Steel Bars, 560
Interactive Process of Microsimulation and Logistic Regression for Short-Term Work Zone Traffic Diversion, 1816
Modeling Pavement Fragility, 1851
Modeling Strength of High-Performance Concrete Using an Improved Grammatical Evolution Combined with Macrogenetic Algorithm, 287
Modeling the Temperature Dependence of Adsorption Equilibriums of VOC(s) onto Activated Carbons, 620
Relationship between Access Management and Other Physical Roadway Characteristics and Safety, 1804
Sensitivity of Model Parameter on Dynamic Behavior Simulation of HPC, 1485
Shear-Wave Velocity Correlations for Puyallup River Alluvium, 901
Statistical Analysis on the Cost and Duration of Public Building Projects, 1327

Regression models

Application of Partial Least-Squares Regression in Seasonal Streamflow Forecasting, 1116
Empirical Modeling of Pavement Overlay Crack Progression with Field Data, 1193
Exploring Best-Fit Hazard Functions and Lifetime Regression Models for Urban Weekend Activities: Case Study, 1817
Model to Describe the Binodal Curve on a Type 1 Ternary Phase Diagram, 686
Multiple Linear Regression Model Approach for Aerosol Dispersion in Ventilated Spaces Using Computational Fluid Dynamics and Dimensional Analysis, 685
Multivariate Polynomial Time-Series Models and Importance Ratios to Qualify Fecal Coliform Sources, 687
Speed Prediction Models for Multilane Highways: Simultaneous Equations Approach, 1880
Statistical Analysis on the Cost and Duration of Public Building Projects, 1327

Regulations

Analysis of Regulatory Guidance Values for Residential Surface Soil Arsenic Exposure, 709
Establishing Storm-Water BMP Evaluation Metrics Based upon Ambient Water Quality Associated with Benthic Macroinvertebrate Populations, 673
International Instruments on Housing Rights, 1294

Rehabilitation

Analytical Investigation of Lateral Strength of Masonry Infilled RC Frames Retrofitted with CFRP, 1526
Apparatus for Testing the Combined Effects of Deformation and Chemical Exposure on Polymeric Liners, 1365
Asset Management for Urban Wastewater Pipeline Networks, 1174
Average Treatment Effect for Modeling Maintenance Work, 1175
Behavior of RC Beams Retrofitted with CARDIFRC after Thermal Cycling, 1342
Bridge Deck Patching Material Evaluation, 163
Bridge Health Index for the City and County of Denver, Colorado. I: Current Methodology, 1554
Bridge Health Index for the City and County of Denver, Colorado. II: Denver Bridge Health Index, 1555
CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183
CFRP Repair of RC Beams with Shear-Span and Full-Span Corrosions, 208
Comparative Analysis on the Seismic Behavior of Combined RC-Masonry Buildings, 1752
Confinement Effectiveness of FRP in Retrofitting Circular Concrete Columns under Simulated Seismic Load, 230
Cost Estimating Models for Utility Rehabilitation Projects: Neural Networks versus Regression, 1574
Critical Analysis of Different Hilbert-Huang Algorithms for Pavement Profile Evaluation, 309
Design Structure Matrix Implementation on a Seismic Retrofit, 1331
Development of Fiber-Reinforced Cement-Based Composite Sheets for Structural Retrofit, 1405
Effect of Geometric Discontinuities on Strains in FRP-Wrapped Columns, 189
Effect of Wrinkles on the Circumferential Strength of a Cast-in-Place Composite Polymer Liner Used in Retrofitting Pressure Pipes, 1492
Effective Repair for Corrosion Control Using FRP Wraps, 215
Effects of Recycled Materials on Long-Term Performance of Cold In-Place Recycled Asphalt Roads, 1523
Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185
Estimation of Maximum Roof Displacement Demands in Regular Multistory Buildings, 459
Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128

Experimental Behavior of Carbon Fiber-Reinforced Polymer (CFRP) Sheets Attached to Concrete Surfaces Using CFRP Anchors, 194

Fatigue and Strength Evaluation of Two Glass Fiber-Reinforced Polymer Bridge Decks, 122

Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218

FE Modeling of FRP-Repaired Planar Concrete Elements Subjected to Monotonic and Cyclic Loading, 247

Field Monitoring and Repair of a Glass Fiber-Reinforced Polymer Bridge Deck, 1516

Footprint Design Manual for Local Roads, 2244

FRP Strengthening of Full-Scale PC Girders, 228

FRP-Retrofitted URM Walls under In-Plane Shear: Review and Assessment of Available Models, 249

Highway Network Retrofit under Seismic Hazard, 1182

Improved Repair of Concrete Structures Using Polymer Concrete Patch and FRP Overlay, 1375

Improving the Seismic Performance of Existing Buildings and Other Structures, 2259

Influence of Highway Project Characteristics on Contract Type Selection: Empirical Assessment, 1196

Inspection and Repair of Ceramic Tiling within a Building Management System, 1344

Integrated Planning Framework for Urban River Rehabilitation, 2029

Investigation into the Effect of Bonding on FRP-Wrapped Cylindrical Concrete Columns, 246

Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525

Investigation of the Curing Mechanism of Foamed Asphalt Mixes Based on Micromechanics Principles, 1343

Ironclad, 2204

Methods for Enlarging Transportation Tunnels while Keeping Tunnels Fully Operational, 2155

Modeling Pavement Fragility, 1851

Monitoring System to Provide Assurance for Maintenance of Structures, 2128

Moving-Wheel Fatigue for Bridge Decks Strengthened with CFRP Strips Subject to Negative Bending, 253

Multicriteria Group Decision-Making Technique for a Low-Class Road Maintenance Program, 1183

Multiobjective Evolutionary Approach to Rehabilitation of Urban Drainage Systems, 2014

A New Approach, 2165

New Life for an Old Line, 2192

Optimal Maintenance and Repair Policies under Nonlinear Preferences, 1163

Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994

Performance of a Retrofitted Medieval Stone Bridge under a Severe Flood, 1545

Performance Problems and Stabilization Techniques for Granular Shoulders, 1511

Pipelines 2010, 2268

Rehabilitation and Preservation of the St. Lourdes Church, Tiruchirappalli, 1524

Reliability-Based Evaluation of Flexural Members Strengthened with Externally Bonded Fiber-Reinforced Polymer Composites, 1721

Retrofitting of Rectangular Columns with Deficient Lap Splices, 179

Scheduling Renewal of Water Pipes While Considering Adjacency of Infrastructure Works and Economies of Scale, 2011

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. I: Bridge Modeling, Parametric Analysis, and Retrofit Design, 137

Seismic Rehabilitation of Corner RC Beam-Column Joints Using CFRP Composites, 244

Seismic Response of FRP-Upgraded Exterior RC Beam-Column Joints, 195

Shear Strengthening of RC T-Beams Using Mechanically Anchored Unbonded Dry Carbon Fiber Sheets, 1497

Slenderness Effects on Circular CFRP Confined Reinforced Concrete Columns, 204

Stability Analysis of Bay Bridge Saddle Configuration, 1764

State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181

Static and Cyclic Out-of-Plane Response of Masonry Walls Strengthened Using Textile-Mortar System, 1475

Structural Condition Assessment of Sewer Pipelines, 1512

Study of Stress Intensity Factor of a Cracked Steel Plate with a Single-Side CFRP Composite Patching, 254

Tests on Seismically Damaged Reinforced Concrete Structural Walls Repaired Using Fiber-Reinforced Polymers, 236

Time-Dependent Reliability Analysis of FRP Rehabilitated Pipes, 203

Reinforced Concrete

Analysis of Moment Redistribution in Fiber-Reinforced Polymer Plated RC Beams, 219

Analysis of Reinforced Concrete Shells with Transverse Shear Forces, 1690

Analytical Investigation of Lateral Strength of Masonry Infilled RC Frames Retrofitted with CFRP, 1526

Analytical Model for FRP Confinement of Concrete Columns with and without Internal Steel Reinforcement, 245

Assessment of Thermal Damage in Hybrid Fiber-Reinforced Concrete, 1437

Reinforced concrete

Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627

Axial Load Capacity of Concrete-Filled FRP Tube Columns: Experimental versus Theoretical Predictions, 199

Reinforced Concrete

CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183

Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751

Comparative Analysis on the Seismic Behavior of Combined RC-Masonry Buildings, 1752

Condition Assessment of Corrosion-Distressed Reinforced Concrete Buildings Using Fuzzy Logic, 1552

Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706

Effect of Contamination on Reinforcing Bar-Concrete Bond, 1515

Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185

Elongation of Reinforced Concrete Members Subjected to Cyclic Loading, 1711

Estimation of Shear Strength of Structural Shear Walls, 1727

Experimental Behavior of Carbon Fiber-Reinforced Polymer (CFRP) Sheets Attached to Concrete Surfaces Using CFRP Anchors, 194

Experimental Evaluation of Posttensioned Precast Concrete Coupling Beams, 1713

FE Modeling of FRP-Repaired Planar Concrete Elements Subjected to Monotonic and Cyclic Loading, 247

Finite-Element Modeling of Nonlinear Behavior of Masonry-Infilled RC Frames, 1635

Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554

Grooving as Alternative Method of Surface Preparation to Postpone Debonding of FRP Laminates in Concrete Beams, 255

In-Plane Behavior of Partially Grouted Reinforced Concrete Masonry Shear Walls, 1715

Interface Shear Connection Analysis of Ultrahigh-Performance Fiber-Reinforced Concrete Composite Girders, 141

Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525

Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710

Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256

Parametric Estimation for RC Flexural Members Based on Distributed Long-Gauge Fiber Optic Sensors, 1620

Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593

Radial Basis Function Neural Network Models for Peak Stress and Strain in Plain Concrete under Triaxial Stress, 1447

Recommendations for Design of Reinforced Concrete Pipe, 1564

Reinforced concrete

Seismic Design of Hybrid Coupled Wall Systems: State of the Art, 1683

Reinforced Concrete

Seismic Response and Fragility of Deteriorated Reinforced Concrete Bridges, 1733

Shear Strength of Large Concrete Members with FRP Reinforcement, 240

Shear Strengthening of RC T-Beams Using Mechanically Anchored Unbonded Dry Carbon Fiber Sheets, 1497

Simple Plastic Model for Shear Critical SFRC Beams, 1647

Simplified Methodology for the Evaluation of the Residual Strength of Corroded Reinforced Concrete Beams, 1506

Stiffness Degradation and Time to Cracking of Cover Concrete in Reinforced Concrete Structures Subject to Corrosion, 480

Reinforced concrete

Strengthening RC T-Beams Subjected to Combined Torsion and Shear Using FRP Fabrics: Experimental Study, 206

Reinforced Concrete

Tests on Seismically Damaged Reinforced Concrete Structural Walls Repaired Using Fiber-Reinforced Polymers, 236

Torsional Strength of RC Beams Considering Tension Stiffening Effect, 1741

Use of Mixed-Mode Fracture Interfaces for the Modeling of Large-Scale FRP-Strengthened Beams, 259

Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

Verification of Nondimensional Energy Spectrum-Based Blast Design for Reinforced Concrete Members through Actual Blast Tests, 1669

Reinforcement

Assessment of Construction Joint Effect in Full-Scale Concrete Beams by Acoustic Emission Activity, 547

Bend Strength of FRP Stirrups: Comparison and Evaluation of Testing Methods, 177

CFRP Repair of RC Beams with Shear-Span and Full-Span Corrosions, 208

Embankments over Soft Clay Deposits: Contribution of Basal Reinforcement and Surface Sand Layer to Stability, 799

Environmental Reduction Factors for GFRP Bars Used as Concrete Reinforcement: New Scientific Approach, 225

Exhumed Geogrid-Reinforced Retaining Wall, 902

Experimental Analysis of Reinforced Concrete Block Masonry Walls Subjected to In-Plane Cyclic Loading, 1653

Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218

Fatigue Performance of Tension Steel Plates Strengthened with Prestressed CFRP Laminates, 237

Full-Scale Impact Test of Four Traffic Barriers on Top of an Instrumented MSE Wall, 815

Glued Composite Timber-Concrete Beams. I: Interlayer Connection Specimen Tests, 1729

Glued Composite Timber-Concrete Beams. II: Analysis and Tests of Beam Specimens, 1730

Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Concept Development, 125

Influence of Relative Density of Soil on Performance of Geocell-Reinforced Sand Foundations, 1400

Load-History Effects on Deformation Capacity of Flexural Members Limited by Bar Buckling, 1606

Optimum Percentage of Fly Ash Reinforcement in Vinyl Ester Composites, 1351

Ring-Reinforced Pipelines: That Moment of Mystery, 1568

Seismic Behavior of Reinforced Concrete Exterior Wide Beam-Column Joints, 1608

Stability Analysis of Strain-Softening Slope Reinforced with Stabilizing Piles, 927

Relative density

Influence of Relative Density of Soil on Performance of Geocell-Reinforced Sand Foundations, 1400

Relaxation, mechanics
Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822

Reliability
Assessment of Link Reliability as a Function of Congestion Components, 1886
Deterioration Forecasting Model with Multistage Weibull Hazard Functions, 1192
Determining Reliability of an Asphalt Mix Design: Case of Marshall Method, 1791
Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783
Estimation of Probabilistic Extreme Wind Load Effects: Combination of Aerodynamic and Wind Climate Data, 532
Evaluation of Subgrade Strength and Pavement Designs for Reliability, 1829
Influence of Spatially Variable Side Friction on Single Drilled Shaft Resistance and LRFD Resistance Factors, 884
Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734
Modeling Pavement Fragility, 1851
Models for Managing Contingency Construction Operations, 353
Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759
Observations on Limit Equilibrium–Based Slope Reliability Problems with Inclined Weak Seams, 581
Probabilistic Assessment of Concrete Structure Durability under Reinforcement Corrosion Attack, 1553
Probabilistic Seismic Loss Assessment of a Vancouver High-Rise Building, 1630
Reliability Analysis of Buried Flexible Pipe-Soil Systems, 1565
Reliability-Constrained Optimization of Water Treatment Plant Design Using Genetic Algorithm, 647
Shear-Wave Velocity Correlations for Puyallup River Alluvium, 901
Time-Dependent Reliability Analysis of FRP Rehabilitated Pipes, 203
Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth, 917

Remediation
Application of a Mass Balance-Based Stochastic Transport Model, 2113
Effectiveness of Source-Zone Remediation of DNAPL-Contaminated Subsurface Systems, 663
Evaluation and Remediation of an Abandoned Gypsum Mine, 835
Field Evaluation of Bauxite Residue Neutralization by Carbon Dioxide, Vegetation, and Organic Amendments, 726
Health-Risk-Based Remedial Alternatives for Contaminated Aquifer Management, 2101
Multiobjective Groundwater Remediation System Design Using Coupled Finite-Element Model and Nondominated Sorting Genetic Algorithm II, 1091
Remediation and Air Void Stability of Hauled Self-Consolidating Concrete, 1445
Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705
Transport Characteristics in a 3D Groundwater Circulation Flow Field by Experimental and Numerical Investigations, 2115

Remote sensing
Benefits and Barriers of Construction Project Monitoring Using High-Resolution Automated Cameras, 377
Combining Remotely Sensed Data and Ground-Based Radiometers to Estimate Crop Cover and Surface Temperatures at Daily Time Steps, 1225
Comparison of Ordinary Kriging, Regression Kriging, and Cokriging Techniques to Estimate Soil Salinity Using LANDSAT Images, 1240
Development of EPA OTM 10 for Landfill Applications, 700
Methodology for Bayesian Belief Network Development to Facilitate Compliance with Water Quality Regulations, 1168
Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224
Riparian Vegetation Mapping for Hydraulic Roughness Estimation Using Very High Resolution Remote Sensing Data Fusion, 1032
Terrestrial Laser Scanning for Monitoring Streambank Retreat: Comparison with Traditional Surveying Techniques, 1023
Terrestrial Laser Scanning-Based Structural Damage Assessment, 285

Renewable energy
Bioenergy and Biofuel from Biowastes and Biomass, 2228
Supporting the Winds of Change, 2205

Repeated loads
Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction, 1465
Modeling Permanent Deformation of Unbound Granular Materials under Repeated Loads, 37
Ranking Binder Creep Performance Using the ARRB Elastometer, 1391

Replacement
Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128
Pipelines 2010, 2268

Research
Action Research as a Proactive Research Method for Construction Engineering and Management, 323
Building Information Modeling in Architecture, Engineering, and Construction: Emerging Research Directions and Trends, 1595
Charrettes as a Method for Engaging Industry in Best Practices Research, 321
Contextualist Research: Iterating between Methods While Following an Empirically Grounded Approach, 326
Cultivating Research and Information Skills in Civil Engineering Undergraduate Students, 1584
Ethnographic Theory-Building Research in Construction, 320
Experimental Research in Construction, 317
Implementing Observational Research Methods to Study Team Performance in Construction Management, 322
Methodology for Written and Oral Presentation of Research Results, 1593

Mixed Method Research: Fundamental Issues of Design, Validity, and Reliability in Construction Research, 325

Qualitative Research: Application of the Delphi Method to CEM Research, 324

Rational Three-Step Method for Optimizing Value of Civil Engineering Research, 1322

Research on a Short-Range Prediction Model for Track Irregularity over Small Track Lengths, 1905

Research Validation: Challenges and Opportunities in the Construction Domain, 327

Reservoirs

Data Consolidation from Hydroelectric Plants, 456

Energy Dissipative Plunging Flows, 996

Experimental Study on Selective Withdrawal in a Two-Layer Reservoir Using a Temperature-Control Curtain, 967

Hydrospatial Approach to Assist Decision Making on Reservoir Protection Zones, 1087

Impacts and Uncertainty of Climate Change on Water Resource Management of the Peribonka River System (Canada), 1997

Impulse Product Parameter in Landslide Generated Impulse Waves, 2043

Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086

Laboratory Experiments on the Failure of Coarse Homogeneous Sediment Natural Dams on a Sloping Bed, 1033

Large-Scale Nonlinear Conjunctive Use Optimization Problem: Decomposition Algorithm, 1964

Long-Term Operation of Irrigation Dams Considering Variable Demands: Case Study of Zayandeh-rud Reservoir, Iran, 1234

Mastering a Mountain, 2223

Modeling Evaporative Water Loss from the On-Farm Reservoir with Biological Shading, 1111

Modeling the Time Variation of Reservoir Trap Efficiency, 1155

New Empirical Method for Prediction of Sediment Distribution in Reservoirs, 1137

Novel Multiobjective Shuffled Frog Leaping Algorithm with Application to Reservoir Flood Control Operation, 1981

Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114

Optimization of Watershed Control Strategies for Reservoir Eutrophication Management, 1291

Parsimonious Model for Combined Sewer Overflow Pollution, 646

Passive Restraint System for Floating Docks with Large Water-Level Excursions, 2159

Practical Formulas for Frequency Domain Analysis of Earthquake-Induced Dam-Reservoir Interaction, 470

Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617

Time-Domain Hydrodynamic Forces on Rigid Dams with Reservoir Bottom Absorption of Energy, 585

Using a Distributed Hydrologic Model to Evaluate the Location of Urban Development and Flood Control Storage, 2020

Residential location

Life-Cycle Perspective on Residential Water Conservation Strategies, 1166

Pinning Force during Closure Process at Blocked Pipe Entrance, 1215

Residential Water Demand under Alternative Rate Structures: Simulation Approach, 1999

Seasonal Residential Water Demand Forecasting for Census Tracts, 1961

Simulating Residential Water Demand with a Stochastic End-Use Model, 1960

Residual soils

Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924

Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838

Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas, 826

Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas

Residual strength

Simplified Methodology for the Evaluation of the Residual Strength of Corroded Reinforced Concrete Beams, 1506

Residual stress

Behavior of Hollow Tubular-Flange Girder Systems for Curved Bridges, 1624

Characterization of the Residual Stress State in Commercially Fully Toughened Glass, 1359

Resilient modulus

Application of Shakedown Theory in Characterizing Traditional and Recycled Pavement Base Materials, 1813

Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction, 1465

Estimation of Resilient Modulus of Subgrade Soils for Design of Pavement Structures, 1422

Mechanistic Corrections for Determining the Resilient Modulus of Base Course Materials Based on Elastic Wave Measurements, 881

Modeling Permanent Deformation of Unbound Granular Materials under Repeated Loads, 37

Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties, 12

Performance of a Stabilized Aggregate Base Subject to Different Durability Procedures, 1397

Sensitivity of Untreated Reclaimed Asphalt Pavement to Moisture, Density, and Freeze Thaw, 1487

Resonance

New Dynamic Participation Factor for Turbine-Generator Foundations, 2135

Numerical Modeling for Hydraulic Resonance in Hydropower Systems Using Impulse Response, 1039

Water Well Resonance Induced by Preearthquake Signals, 575

Resource allocation

Optimizing Resource Utilization during the Recovery of Civil Infrastructure Systems, 1339

Scheduling Resource-Constrained Projects with Ant Colony Optimization Artificial Agents, 266

Single-Stage Integer Programming Model for Long-Term Transit Fleet Resource Allocation, 1819

Resource management

Application of Innovative Critical Chain Method for Project Planning and Control under Resource Constraints and Uncertainty, 419

Economics and Finance for Engineers and Planners, 2238

Impact of Resources and Strategies on Construction Company Performance, 1318

Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316

Response spectra

Blast Limits for Transmission Structures. I: Response Spectra Development, 1500

Time-Domain Hydrodynamic Forces on Rigid Dams with Reservoir Bottom Absorption of Energy, 585

Restoration

Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051

Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002

Coherent Structure Dynamics in Turbulent Flows Past In-Stream Structures: Some Insights Gained via Numerical Simulation, 1046

Effect of Rejuvenation Methods on the Infiltration Rates of Pervious Concrete Pavements, 1098

Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047

Energy Supply System Performance for Hurricane Katrina, 457

Entering the Mainstream, 2203

Field Evaluation of Bauxite Residue Neutralization by Carbon Dioxide, Vegetation, and Organic Amendments, 726

Footprint Design Manual for Local Roads, 2244

Modeling Unsteady Flow Characteristics of Hydropeaking Operations and Their Implications on Fish Habitat, 1052

Predictive Modeling of Transient Storage and Nutrient Uptake: Implications for Stream Restoration, 1049

Rehabilitation and Preservation of the St. Lourdes Church, Tiruchirappalli, 1524

River Training and Ecological Enhancement Potential Using In-Stream Structures, 1045

Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623

Water Quality Modeling of a Hypoxic Stream, 2107

Retaining walls

Design and Performance of a 46-m-High MSE Wall, 851

Earth Retention Conference 3, 2237

Evaluation of Stone Strong Gravity Wall System by Stone Strong Systems: Final Report, 2242

Exhumed Geogrid-Reinforced Retaining Wall, 902

Finite-Element Simulations of Full-Scale Modular-Block Reinforced Soil Retaining Walls under Earthquake Loading, 523

GeoTrends, 2249

Ground Movements around Corners of Excavations: Empirical Calculation Method, 911

Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932

New Life for an Old Line, 2192

Reduced Modulus Action in U-Section Steel Sheet Pile Retaining Walls, 816

Seismic Design of Flexible Cantilevered Retaining Walls, 807

Seismic Earth Pressures on Cantilever Retaining Structures, 903

Seismic Rotational Displacements of Gravity Walls by Pseudodynamic Method with Curved Rupture Surface, 21

Seismic Rotational Stability of Waterfront Retaining Wall Using Pseudodynamic Method, 16

Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills, 123

Retention

Earth Retention Conference 3, 2237

Revenues

Employing the Net Present Value-Consistent IRR Methods for PFI Contracts, 395

Reynolds number

Application of Riprap and Collar to Prevent Scouring around Rectangular Bridge Piers, 962

Influence of Relative Roughness and Reynolds Number on the Roll-Waves Spatial Evolution, 943

Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition, 956

Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition

Reynolds Number Effects on the Near-Exit Region of Turbulent Jets, 1006

Reynolds stress

Depth-Averaged Shear Stress and Velocity in Open-Channel Flows, 1043

Effect of Vegetation on Banks on Distributions of Velocity and Reynolds Stress under Accelerating Flow, 1127

Rheology

Assessment of Rheological Characteristics of a Natural Bingham-Plastic Mixture in Turbulent Pipe Flow, 1027

Development of Fiber-Reinforced Cement-Based Composite Sheets for Structural Retrofit, 1405

Effects of Aging on the Mechanical Characteristics of Bituminous Binders in PAC, 1429

Influence of Commercial Wax on Performance of Asphalt, 1426

Interactions of Granite and Asphalt Based on the Rheological Characteristics, 1435

Modular High-Force Seismic Magneto-Rheological Fluid Damper, 1619

Morphology and Substrate Control on the Dynamics of Flowlike Landslides, 810

Morphology of Asphalt Mixture Rheological Master Curves, 1433

New Parameter to Evaluate Moisture Damage of Asphalt-Aggregate Bond in Using Dynamic Shear Rheometer, 1370

Rheological Characterization of Sludges during Belt Filtration Dewatering Using an Immobilization Cell, 721

Rigid pavements
Full-Scale Field Testing for Verification of Mechanical Properties of Polyurethane Foams for Use as Backfill in PCC Repairs, 1367

Rio Grande
Case Study: Movable Bed Model Scaling for Bed Load Sediment Exclusion at Intake Structure on Rio Grande, 968

River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289

Rip currents
Wave and Flow Response to an Artificial Surf Reef: Laboratory Measurements, 973

Riparian land
Hydrospatial Approach to Assist Decision Making on Reservoir Protection Zones, 1087

Riprap
Application of Riprap and Collar to Prevent Scouring around Rectangular Bridge Piers, 962

Risk management
Case-Based Reasoning Approach to Construction Safety Hazard Identification: Adaptation and Utilization, 331

Construction Risks: Single versus Portfolio Insurance, 1317

Determinants of Efficient Risk Allocation in Privately Financed Public Infrastructure Projects in Australia, 328

Developing a Fuzzy Risk Allocation Model for PPP Projects in China, 404

Effects of Pavement Spatial Variability on Contractor's Management Strategies, 1187

Empirical Study of the Risks and Difficulties in Implementing Guaranteed Maximum Price and Target Cost Contracts in Construction, 364

Engineering Perspectives on Reducing Hurricane Damage to Housing in CARICOM Caribbean Islands, 2092

Enhanced Estimation of Terrestrial Loadings for TMDLs: Normalization Approach, 1995

Entropic Risk Analysis by a High Level Decision Support System for Construction SMEs, 270

Evaluation of Risk Factors Leading to Cost Overrun in Delivery of Highway Construction Projects, 367

Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554

Health-Risk-Based Remedial Alternatives for Contaminated Aquifer Management, 2101

Hierarchical Fuzzy Expert System for Risk of Failure of Water Mains, 1567

Hierarchical Structuring of PPP Risks Using Interpretative Structural Modeling, 329

Improving Engineering Education Outreach in Rural Counties through Engineering Risk Analysis, 1604

Improving Flood Insurance and Flood-Risk Management: Insights from St. Louis, Missouri, 2094

Integrated Conveyance Condition Assessment Techniques Support Asset Management and Capacity Driven Projects, 1573

Knowledge and Data Integration for Modeling of Problems of Risk due to Natural and Man-Made Hazards, 2120

Methodological Framework for Evaluation of Financial Viability of Public-Private Partnerships: Investment Risk Approach, 1188

Multiple Flood Source Expected Annual Damage Computations, 1991

Neurofuzzy Decision Support System for Efficient Risk Allocation in Public-Private Partnership Infrastructure Projects, 310

Obstacles and Disaster Risk Reduction: Survey of Memphis Organizations, 2089

OCCASION: New Planning Tool for Optimal Climate Change Adaption Strategies in Irrigation, 1290

Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994

Planning Unidirectional Flushing Operations as a Response to Drinking Water Distribution System Contamination, 2025

Political, Economic, and Legal Risks Faced in International Projects: Case Study of Vietnam, 1597

Population and Initial Validation of a Formal Model for Construction Safety Risk Management, 412

Practical Application of SWOT Analysis in the Management of a Construction Project, 2070

Probabilistic Approach for Budgeting in Portfolio of Projects, 350

Probability Analysis of Hydrological Loads for the Design of Flood Control Systems Using Copulas, 1092

Proposal of an Integrated Index for Prioritization of Bridge Maintenance, 126

Qualitative Research: Application of the Delphi Method to CEM Research, 324

Quantitative Risk Assessment of Cut-Slope Projects under Construction, 933

Rational Three-Step Method for Optimizing Value of Civil Engineering Research, 1322

REILP Approach for Uncertainty-Based Decision Making in Civil Engineering, 294

Revisiting the Strengths and Limitations of Regulatory Contracts in Infrastructure Industries, 1197

Risk Allocation in Public-Private Partnership Infrastructure Projects: Comparative Study, 1198

Risk Evaluation for Maxi Horizontal Directional Drilling Crossing Projects, 1572

Risk Management in the Construction Industry Using Combined Fuzzy FMEA and Fuzzy AHP, 416

Risk-Based Sensor Placement for Contaminant Detection in Water Distribution Systems, 2023

Robust Design of Water Distribution Networks for a Proactive Risk Management, 1982

Selecting Appropriate Project Delivery System: Fuzzy Approach with Risk Analysis, 407

So, You Live Behind a Levee! What you should know to protect your home and loved ones from floods, 2279

"Three Little Pigs" Project: Hurricane Risk Mitigation by Integrated Wind Tunnel and Full-Scale Laboratory Tests, 2093

Time-Dependent Risk Assessment of Combined Overtopping and Structural Failure for Reinforced Concrete Coastal Structures, 2038

Tsunami Preparedness on the Oregon and Washington Coast: Recommendations for Research, 2085

Ultimate Wind Load Design Gust Wind Speeds in the United States for Use in ASCE-7, 1668

Understanding and Improving Your Risk Management Capability: Assessment Model for Construction Organizations, 400

Wind Storm and Storm Surge Mitigation, 2295

River bank erosion

Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002

Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047

River bank stabilization

Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002

Effect of Vegetation on Banks on Distributions of Velocity and Reynolds Stress under Accelerating Flow, 1127

River basins

Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975

Evaluating Watershed Management within a River Basin Context Using an Integrated Indicator System, 1985

Flood Forecasting in Regulated Basins Using the Ensemble Extended Kalman Filter with the Storage Function Method, 1158

Improving HSPF Modeling Accuracy from FTABLES: Case Study for the Illinois River Basin, 1119

Integrated Water Resource Management for Kaoping River Basin, 2111

Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138

Joint Water Quantity-Quality Management in a Biofuel Production Area—Integrated Economic-Hydrologic Modeling Analysis, 2009

New Approach to Identify Trend Pattern of Streamflows, 1081

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978

Upper Green River Basin (United States) Streamflow Reconstructions, 1113

Valuing Drinking Water Provision as an Ecosystem Service in the Neuse River Basin, 2006

River beds

3D Calculations of Equilibrium Conditions in Loose-Bed Open Channels with Significant Suspended Sediment Load, 1000

Aquatic Habitat Bottom Classification Using ADCP, 978

Determination of Form Friction Factor, 1080

Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997

Effect of Vegetation on Banks on Distributions of Velocity and Reynolds Stress under Accelerating Flow, 1127

Estimation of the Washout Depth of Fine Sediments from a Granular Bed, 1022

Evaluation of a Novel Approach to Determine the Critical Shields Stress, 1145

Hydraulic and Sedimentological Characterizations of a Reach on the Anaktuvuk River, Alaska, 1040

Laboratory Measurements on Turbulent Pressure Fluctuations in and above Gravel Beds, 1021

Physically Realistic Roughness Closure Scheme to Simulate Turbulent Channel Flow over Rough Beds within the Framework of LES, 1026

Simulation of Radial Collector Well in Shallow Alluvial Riverbed Aquifer Using Analytic Element Method, 1211

Turbulence Characteristics in Flows Subjected to Boundary Injection and Suction, 544

River flow

Assessment of Flooding Risk to Cultural Heritage in Historic Sites, 1539

Discharge Estimation in a Tidal River with Partially Reverse Flow, 2053

Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997

Hydraulic Geometry Relations for Stable Channel Design, 1142

Influence of Vertical Resolution and Nonequilibrium Model on Three-Dimensional Calculations of Flow and Sediment Transport, 953

Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072

Numerical Modeling of River Flow for Ecohydraulic Applications: Some Experiences with Velocity Characterization in Field and Simulated Data, 1050

River systems

Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072

Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054

Real-Time Hydraulic and Hydrodynamic Model of the St. Clair River, Lake St. Clair, Detroit River System, 995

Rivers and streams

Assessment of a River Reach for Environmental Fluid Dynamics Studies, 1034

Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051

Case Study: Effect of Submerged Aquatic Plants on Turbulence Structure in a Lowland River, 988

Coherent Structure Dynamics in Turbulent Flows Past In-Stream Structures: Some Insights Gained via Numerical Simulation, 1046

Effect of Adaptive Cluster Sampling Design on Accuracy of Sediment Rating Curve Estimation, 1071

Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047

Enhanced Estimation of Terrestrial Loadings for TMDLs: Normalization Approach, 1995

Entering the Mainstream, 2203

Evaluation of Apparatus for Membrane Cleaning Tests, 740

Formulation of the Entropy Parameter Based on Hydraulic and Geometric Characteristics of River Cross Sections, 1141

Fuzzy Nonlinear Regression Approach to Stage-Discharge Analyses: Case Study, 1060

Gauging Rivers during All Seasons Using the Q2D Velocity Index Method, 963

Genetic Programming to Predict River Pipeline Scour, 1577
Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053
Incorporation of Air Emissions in Dredging Method Selection, 2046
Integrated Planning Framework for Urban River Rehabilitation, 2029
Linking Pathogen Sources to Water Quality in Small Urban Streams, 637
Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717
Modeling Unsteady Flow Characteristics of Hydropeaking Operations and Their Implications on Fish Habitat, 1052
Nonintrusive Method for Detecting Particle Movement Characteristics near Threshold Flow Conditions, 1284
Numerical Age and Residence-Time Mapping for a Small Tidal Creek: Case Study, 2049
One-Dimensional Study on Propagation of Tsunami Wave in River Channels, 950
Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114
River Training and Ecological Enhancement Potential Using In-Stream Structures, 1045
Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623
Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004
Sensitivity Analysis of Nonequilibrium Adaptation Parameters for Modeling Mining-Pit Migration, 1025
Shear-Wave Velocity Correlations for Puyallup River Alluvium, 901
Three-Dimensional Semianalytical Solutions of Groundwater Flow to a Well in Fractured Wedge-Shaped Aquifers, 1153
Valuation of Flood Reductions in the Yellow River Basin under Land Use Change, 1969
Water Quality Modeling of a Hypoxic Stream, 2107
Watershed Management 2010, 2293

Rivets

Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Robotics

Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185
Identification of Nearshore Wave Characteristics Using Robotic Total Stations, 1787

Rock masses

Estimating Subgrade Reaction Modulus for Transversely Isotropic Rock Medium, 880
Method for Estimating the Deformability of Heavily Jointed Rock Masses, 896

Rock mechanics

Geoenvironmental Engineering and Geotechnics (GSP 204), 2246
Method for Estimating the Deformability of Heavily Jointed Rock Masses, 896

Rocks

Block Element Method for the Seismic Stability of Rock Slopes, 930
Comparison between Models of Rock Discontinuity Strength and Deformation, 858
Discrete Element Modeling of Strength Properties of Johnson Space Center (JSC-1A) Lunar Regolith Simulant, 57
Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691
Forensic Investigations to Evaluate Sulfate-Induced Heave Attack on a Tunnel Shotcrete Liner, 1446
Geomechanical Characterization of the Volcaniclastic Material Involved in the 2002 Landslides at Stromboli, 811
Plane-Strain Propagation of a Fluid-Driven Crack in a Permeable Rock with Fracture Toughness, 574
Relationship between Texas Cone Penetrometer Tests and Axial Resistances of Drilled Shafts Socketed in Clay Shale and Limestone, 888
Self-Aeration and Friction over Rock Chutes in Uniform Flow Conditions, 1044
Stochastic Simulation of Non-Gaussian 3D Conductivity Fields in a Fractured Medium with Multiple Statistical Populations: Case Study, 1112

Rods

Dynamic Instability of Nanorods/Nanotubes Subjected to an End Follower Force, 563
Lewis Wernwag and the Colossus of 1812, 2152
Multiple Scales Solution for a Beam with a Small Bending Stiffness, 466

Roller-compacted concrete

Experimental Study on the Impact of Rainfall on RCC Construction, 362

Roofs

Analysis of Wind-Induced Clip Loads on Standing Seam Metal Roofs, 1641
Cost-Effectiveness of Green Roofs, 91
Dramatic Inclination, 2202
Effect of Fastener-Deck Strength on the Wind-Uplift Performance of Mechanically Attached Roofing Assemblies, 2131
Estimation of Maximum Roof Displacement Demands in Regular Multistory Buildings, 459
Inspection, Condition Assessment, and Management Decisions for Commercial Roof Systems, 86
Large Membrane Roof Analysis: Nonlinear Modeling of Structures, Connectors, and Experimental Evidences, 93
Life-Cycle Costs of Commercial Roof Systems, 79
Methodology for Wind-Driven Rainwater Intrusion Fragilities for Light-Frame Wood Roof Systems, 1676
Observed and Modeled Performances of Prototype Green Roof Test Plots Subjected to Simulated Low- and High-Intensity Precipitations in a Laboratory Experiment, 1100
Physically Based Green Roof Model, 1101
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095
Snow Loads, 2278
Super Span (SuperSpan), 2160
Super Span (SuperSpan)
Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722

Rotation
Analysis of Moment Redistribution in Fiber-Reinforced Polymer Plated RC Beams, 219
Drained Deformation Behavior of Anisotropic Sands during Cyclic Rotation of Principal Stress Axes, 920
Evaluation of Lateral Interpretation Criteria for Drilled Shaft Capacity, 885
Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123
Extension of the Touratier Kinematic Model to Large Strains, Displacements, and Rotations, 587
Horizontal Dispersion in Gyres-Internal Wave Flow Field in a Rotating Circular Lake, 1115
Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105
Load-History Effects on Deformation Capacity of Flexural Members Limited by Bar Buckling, 1606
New Dynamic Participation Factor for Turbine-Generator Foundations, 2135
Rotation- and Translation-Free Estimations of Symmetric, Rank-Two Tensors with a Case Study in LIDAR Surveying, 1768
Rotation Compatibility Approach to Moment Redistribution for Design and Rating of Steel I-Girder Bridges, 99
Statistical Properties of Strain and Rotation Tensors in Geodetic Network, 1778
Three-Dimensional Structural Translation and Rotation Measurement Using Monocular Videogrammetry, 540

Roughness
Evaluation of the Effect of Pavement Roughness on Skid Resistance, 1857
Nanoscale Evaluation of Moisture Damage in Polymer Modified Asphalts, 1421

Routing
Design of Integrated Bioinfiltration-Detention Urban Retrofits with Design Storm and Continuous Simulation Methods, 1104
Multimodal Feeder Network Design Problem: Ant Colony Optimization Approach, 1824
Pipe Routing through Ant Colony Optimization, 1178
Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251
Traffic Modeling and College-Bus Routing Using Entropy Maximization, 1800

Rubber
Characteristics of Rubber-Sand Particle Mixtures according to Size Ratio, 1376
Characterization of the Interaction Effect of Crumb Rubber Modified Binders Using HP-GPC, 1356
Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657
Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449
Tensile Stiffness and Deformation Model of Rubber Isolators in Tension and Tension-Shear States, 501

Runoff
Application of a Distributed Hydrologic Model to the November 17, 2004, Flood of Bull Creek Watershed, Austin, Texas, 1120
Characterizing Physicochemical Quality of Storm-Water Runoff from an Urban Area in Calgary, Alberta, 745
Derivation of Flood Hydrographs for Ungauged Upstream Subwatersheds Using a Main Outlet Hydrograph, 1160
Design of Integrated Bioinfiltration-Detention Urban Retrofits with Design Storm and Continuous Simulation Methods, 1104
Diffusion Wave Model for Simulating Storm-Water Runoff on Highway Pavement Surfaces at Superelevation Transition, 1020
Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628
Effect of Historic Land Cover Change on Runoff Curve Number Estimation in Iowa, 1124
Effect of Storm-Water Wetlands and Wet Ponds on Runoff Temperature in Trout Sensitive Waters, 1273
Effects of Urbanization on Groundwater, 2239
Evaluation of Surface Water Runoff from Fly Ash–Stabilized and Nonstabilized Soil Surfaces, 716
Frequency Methodology for Evaluating Urban and Highway Storm-Water Quality Control Infiltration BMPs, 1983
Impact of Storm-Water Runoff on Clogging and Fecal Bacteria Reduction in Sand Columns, 772
Impacts of Construction Activity on Bioretention Performance, 1094
Incentive Index Developed to Evaluate Storm-Water Low-Impact Designs, 761
Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096
Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138
Long-Term Simulation of a System for Catchment, Pretreatment, and Treatment of Polluted Runoff Water, 773
Modeling and Sizing Bioretention Using Flow Duration Control, 1097
Modeling Evapotranspiration of Two Land Covers Using Integrated Hydrologic Model, 1256
Modeling Techniques of Best Management Practices: Rain Barrels and Rain Gardens Using EPA SWMM-5, 1099
New Approach to Evaluate Pollutant Removal by Storm-Water Treatment Devices, 653
Observed and Modeled Performances of Prototype Green Roof Test Plots Subjected to Simulated Low- and High-Intensity Precipitations in a Laboratory Experiment, 1100
Performance of Nitrogen-Removing Bioretention Systems for Control of Agricultural Runoff, 733
Potential for Clay Clogging of Pervious Concrete under Extreme Conditions, 1063
Practical Melting Forecasting of Artificial Snow Made from Treated Wastewater, 173
Preservation of Watershed Regime for Low-Impact Development through Detention, 1056
Review of Bioretention System Research and Design: Past, Present, and Future, 710
Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623
Runoff Characteristics for Construction Site Erosion Control Practices, 1245
Runoff Volume Reduction by a Level Spreader–Vegetated Filter Strip System in Suburban Charlotte, N.C., 1105

Sensitivity Analysis for an Infiltration-Runoff Model with Parameter Uncertainty, 1122

Side-by-Side Comparison of Nitrogen Species Removal for Four Types of Permeable Pavement and Standard Asphalt in Eastern North Carolina, 1107

Statistical Evaluation of Factors Affecting Indicator Bacteria in Urban Storm-Water Runoff, 763

Thermal Reduction by an Underground Storm-Water Detention System, 671

Transport and Distribution of Particulate Matter Phosphorus Fractions in Rainfall-Runoff from Roadway Source Areas, 744

Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103

Variability of *Escherichia coli* Concentrations in an Urban Watershed in Texas, 762

Volumetric Filtration of Rainfall Runoff. I: Event-Based Separation of Particulate Matter, 759

Volumetric Filtration of Rainfall Runoff. II: Event-Based and Interevent Nutrient Fate, 760

Rural areas

Building Community Disaster Preparedness with Volunteers: Community Emergency Response Teams in Illinois, 2090

Car-Following Interaction and the Definition of Free-Moving Vehicles on Two-Lane Rural Highways, 1888

Evaluation of 10-Year Temperature Differences between Urban and Rural Areas of a Well-Planned, Unindustrialized, and Medium-Sized Turkish Town, Erzincan, 1955

Factors Affecting Driver Speed Choice along Two-Lane Rural Highway Transition Zones, 1869

Horizontal Curve Accident Modification Factor with Consideration of Driveway Density on Rural Four-Lane Highways in Texas, 1877

Improving Engineering Education Outreach in Rural Counties through Engineering Risk Analysis, 1604

Multicriteria Group Decision-Making Technique for a Low-Class Road Maintenance Program, 1183

Roadway Lighting Shows Safety Benefits at Rural Intersections, 1891

Safety

Analysis of Residential Framing Accidents, Activities, and Task Demands, 341

Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185

Autopilot Supported by Nonlinear Model Following Reconfigurable Flight Control System, 75

Block Element Method for the Seismic Stability of Rock Slopes, 930

Case Study to Identify Barriers and Incentives to Implementing an Engineering Control for Concrete Grinding Dust, 437

Case-Based Reasoning Approach to Construction Safety Hazard Identification: Adaptation and Utilization, 331

Construction Safety in Kuwait, 1502

Design Error Classification, Causation, and Prevention in Construction Engineering, 1536

Evaluation of Interslice Force Function and Discussion on Convergence in Slope Stability Analysis by the Lower Bound Method, 883

Evaluation of Lateral Interpretation Criteria for Drilled Shaft Capacity, 885

Evaluation of the Visibility of Workers' Safety Garments during Nighttime Highway-Maintenance Operations, 1850

Identification and Monitoring of Modal Parameters in Aircraft Structures Using the Natural Excitation Technique (NExT) Combined with the Eigensystem Realization Algorithm (ERA), 49

Impacts of Unsaturated Zone Soil Moisture and Groundwater Table on Slope Instability, 914

Life-Cycle Cost Analysis of Highway Intersection Safety Hardware Improvements, 1803

Maximizing Temporary Housing Safety after Natural Disasters, 1177

Method of Superimposition for Suction Force on Trash Rack, 1285

Occupational Licensing of Building Trades: Case of Western Australia, 1603

Pinning Force during Closure Process at Blocked Pipe Entrance, 1215

Practical Solution Concepts for Planning and Designing Roadways, 1820

Reset to Zero and Specify Active Safety Systems according to Real-World Needs, 1837

Safe Operation and Maintenance of Dry Dock Facilities, 2275

So, You Live Behind a Levee! What you should know to protect your home and loved ones from floods, 2279

Special Report: The Infrastructure Roundtables: Seeking Solutions to an American Crisis, 2173

Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. I: NDS Design Equations, 1482

Salinity

Assessment of Flocculation Kinetics of Cohesive Sediments from the Seine and Gironde Estuaries, France, through Laboratory and Field Studies, 2057

Comparison of Ordinary Kriging, Regression Kriging, and Cokriging Techniques to Estimate Soil Salinity Using LANDSAT Images, 1240

Evaluation of a Dielectric Sensor for Measurement of Soil-Water Electrical Conductivity, 1261

Optimal Spacing in an Array of Fully Penetrating Ditches for Subsurface Drainage, 1206

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978

Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232

Salt

Evaporation, Unsaturated Flow, and Salt Accumulation in Multilayer Deposits of "Paste" Gold Tailings, 939

Explanation for Anomalous Readings during Monitoring of a Best Management Practice, 1258

Removal of TDS from Cooling Tower Water by Using EDTA-Modified Bagasse Fibers, 680

Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232

Salt water

A Solid Foundation, 2209

Sampling
Effect of Adaptive Cluster Sampling Design on Accuracy of Sediment Rating Curve Estimation, 1071
Extreme Impact Contamination Events Sampling for Water Distribution Systems Security, 1966
Observations on Limit Equilibrium–Based Slope Reliability Problems with Inclined Weak Seams, 581
Record Length Requirements for Annual Maximum Flood Series, 1126
Research Validation: Challenges and Opportunities in the Construction Domain, 327
Risk-Based Sensor Placement for Contaminant Detection in Water Distribution Systems, 2023
Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623
Stress-Strain Responses of Block Samples of Compressible Chicago Glacial Clays, 790
Volumetric Filtration of Rainfall Runoff. I: Event-Based Separation of Particulate Matter, 759

Sand, filter
Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812
Effect of Sand Columns on the Undrained Load Response of Soft Clays, 898
Impact of Storm-Water Runoff on Clogging and Fecal Bacteria Reduction in Sand Columns, 772
Modeling the Removal of Arsenic by Iron Oxide Coated Sand, 636
Modeling Urban Storm-Water Quality Treatment: Model Development and Application to a Surface Sand Filter, 616
Swine Wastewater Treatment Using Submerged Biofilm SBR Process: Enhancement of Performance by Internal Circulation through Sand Filter, 679

Sand, hydraulic
Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003
Effects of Bed Load and Suspended Load on Separation of Sands and Fines in Mixed Sediment, 2058
Experimental Study of Sand and Slurry Jets in Water, 1017
Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054
Using Flotation to Separate Oil Spill Contaminated Beach Sands, 625

Sand, material
Characteristics of Rubber-Sand Particle Mixtures according to Size Ratio, 1376
Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction, 1465
Experimental Study on Flexural Testing of Compacted Soil Beams, 1392
Micromechanical Modeling for Inherent Anisotropy in Granular Materials, 539
Modified Schapery's Model for Asphalt Sand, 503
Observations on Sand Jets in Air, 577
Shear Strength of Fiber-Reinforced Sands, 821
Time Effects Relate to Crushing in Sand, 893

Sand, Soil type
Behavior of Step Tapered Bored Piles in Sand under Static Lateral Loading, 839
Design Charts for Evaluating Impact Forces on Dissipative Granular Soil Cushions, 922
Dilatancy and Shear Strength of Sand at Low Confining Pressures, 825
Drained Deformation Behavior of Anisotropic Sands during Cyclic Rotation of Principal Stress Axes, 920
Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822

Sand, soil type
Embankments over Soft Clay Deposits: Contribution of Basal Reinforcement and Surface Sand Layer to Stability, 799

Sand, Soil type
Estimation of Lateral Load Capacity of Rigid Short Piles in Sands Using CPT Results, 779
Experimental Study of Eccentrically Loaded Raft with Connected and Unconnected Short Piles, 909
High-Pressure Isotropic Compression Tests on Fiber-Reinforced Cemented Sand, 861
Influence of Relative Density of Soil on Performance of Geocell-Reinforced Sand Foundations, 1400

Sand, soil type
Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands, 517
Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands

Sand, Soil type
Measuring and Modeling Proportion-Dependent Stress-Strain Behavior of EPS-Sand Mixture, 34
Modeling Stress-Dilatancy for Sand under Compression and Extension Loading Conditions, 535
Nonlinear Cone Penetration Test-Based Method for Predicting Footing Settlements on Sand, 813
Percolation Threshold of Sand-Clay Binary Mixtures, 804
Shear Band Formation Observed in Ring Shear Tests on Sandy Soils, 809
Simple Model for the Cyclic Behavior of Smooth Sand-Steel Interfaces, 874
Simple Yield Surface Expressions Appropriate for Soil Plasticity, 29
Simplified Approximation Procedure for Performance-Based Evaluation of Liquefaction Potential, 787
Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789

Sandstone
Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542

Sandwich panels
Steel Hexagonal Honeycomb Core Equivalent Elastic Moduli for Bridge Deck Sandwich Panels, 45
Stochastic Free Vibration Response of Soft Core Sandwich Plates Using an Improved Higher-Order Zigzag Theory, 40

Sandwich structures
Thermomechanical Behavior of Multifunctional GFRP Sandwich Structures with Encapsulated Photovoltaic Cells, 224

Sanitary landfills
Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116

Satellites
Extended Receiver Autonomous Integrity Monitoring (eRAIM) for GNSS/INS Integration, 1767
Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224

Saturated soils
Analytical Solution for Biot Flow–Induced Damping in Saturated Soil during Shear Wave Excitations, 919

Saturation
Behavior of Concrete in Water Subjected to Dynamic Triaxial Compression, 496

Scaffolds
Certifying That Existing Suspended Scaffold Structural Support Elements and Lifeline Anchorages Comply with Federal OSHA Requirements, 2149

Scale effects
Flood Modeling in the Coastal Plains and Mountains: Analysis of Terrain Resolution, 2079

Scheduling
Application of Innovative Critical Chain Method for Project Planning and Control under Resource Constraints and Uncertainty, 419
Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm, 330
Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm
Critical Path Segments Scheduling Technique, 421
Formulation and Solution Approaches to the Rail Maintenance Production Gang Scheduling Problem, 1863
Integrated Framework for Quantifying and Predicting Weather-Related Highway Construction Delays, 429
Integrated Schedule and Cost Model for Repetitive Construction Process, 1325
Integrated Simulation System for Construction Operation and Project Scheduling, 313
Irrigation Scheduling with Genetic Algorithms, 1277
Minimum Moment Method for Resource Leveling Using Entropy Maximization, 366
Modeling Microtunneling Projects using Computer Simulation, 381
Multiobjective Optimization of Time-Cost Trade-Off Using Harmony Search, 385
Neutral Search Technique for Short-Term Pump Schedule Optimization, 1972
OCCASION: New Planning Tool for Optimal Climate Change Adaption Strategies in Irrigation, 1290
Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994
Owners Respond: Preferences for Task Performance, Delivery Systems, and Quality Management, 343
Performance Evaluation and Uncertainty Measurement in Irrigation Scheduling Soil Water-Balance Approach, 1280
Precedence-Preserving GAs Operators for Scheduling Problems with Activities' Start Times Encoding, 293
Probabilistic Forecasting of Project Duration Using Kalman Filter and the Earned Value Method, 398
Profit Optimization for Multiproject Scheduling Problems Considering Cash Flow, 440
Project Compression with Nonlinear Cost Functions, 340
Removal of Redundant Relationships in an AON Project Network for Evaluating Schedule Complexity, 392
Scheduling Resource-Constrained Projects with Ant Colony Optimization Artificial Agents, 266
Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220
Supervised Gain-Scheduling Multimodel versus Linear Parameter Varying Internal Model Control of Open-Channel Systems for Large Operating Conditions, 1260
Why Cost and Schedule Overruns on Mega Oil Sands Projects?, 2132

Schools
Education for Sustainable Development and Civil Engineering for Children: Interactive Model Case Study, 1598
Outreach to K–12 Teachers: Workshop in Instrumentation, Sensors, and Engineering, 1592
Primary Schools' Territorial Policy and Active Commuting: Institutional Influences in Montreal and Trois-Rivières, 1948

Scour
Anomalous Contraction Scour? Vertical-Contraction Case, 955
Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002
Bridge Pier Scour under Flood Waves, 1031
Bridge Scour: Prediction, Modeling, Monitoring, and Countermeasures—Review, 2142
Building Damage due to Riverine and Coastal Floods, 1992
Effect of Flood Recession on Scouring at Bed Sills, 964
Enhancing Utility of Submerged Vanes with Collar, 1008
Experimental Investigation of Clear-Water Local Scour of Compound Piers, 979
Experimental Study of Three-Dimensional Flow Field around a Complex Bridge Pier, 473
Genetic Programming to Predict Bridge Pier Scour, 958
Genetic Programming to Predict River Pipeline Scour, 1577
Influence of Tailwater Depth and Pile Position on Scour Downstream of Block Ramps, 1212
Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054
Scour and Erosion (GSP 210), 2276
Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004
Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045
Temporal Scales for Live-Bed Scour at Abutments, 985

Sea floor
Mechanics of Drag Embedment Anchors in a Soft Seabed, 780

Sea level
Climate Links and Variability of Extreme Sea-Level Events at Key West, Pensacola, and Mayport, Florida, 2061
Clustering Time Series of Sea Levels: Extreme Value Approach, 2048
Direct Joint Probability Method for Estimating Extreme Sea Levels, 2035

Sea water
Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525
Using Flotation to Separate Oil Spill Contaminated Beach Sands, 625

Sealing
Performance of a Nongasketed Flange Joint under Combined Internal Pressure and Bending Loading, 607

Seasonal variations
Application of Partial Least-Squares Regression in Seasonal Streamflow Forecasting, 1116
Nonparametric Simulation of Single-Site Seasonal Streamflows, 1086
Performance of Combined Double Seasonal Univariate Time Series Models for Forecasting Water Demand, 1078
Seasonal Residential Water Demand Forecasting for Census Tracts, 1961

Secondary flow
Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047

Security
Collection and Analysis of Critical Infrastructure Interdependency Relationships, 311
Extreme Impact Contamination Events Sampling for Water Distribution Systems Security, 1966
Guidelines for Roving Security Inspections in Public Venues Using Explosives Detection Dogs, 2254
Models for Managing Contingency Construction Operations, 353
Monitoring Design for Source Identification in Water Distribution Systems, 2024
Planning Unidirectional Flushing Operations as a Response to Drinking Water Distribution System Contamination, 2025
Real-Time Identification of Possible Contamination Sources Using Network Backtracking Methods, 2003
Review of Sensor Placement Strategies for Contamination Warning Systems in Drinking Water Distribution Systems, 2021

Sediment
Aquatic Habitat Bottom Classification Using ADCP, 978
Assessment of Flocculation Kinetics of Cohesive Sediments from the Seine and Gironde Estuaries, France, through Laboratory and Field Studies, 2057
Assessment of Rheological Characteristics of a Natural Bingham-Plastic Mixture in Turbulent Pipe Flow, 1027
Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003
Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812
Case Study: Movable Bed Model Scaling for Bed Load Sediment Exclusion at Intake Structure on Rio Grande, 968
Deposition from Particle-Laden, Plane, Turbulent, Buoyant Jets, 5
Design of Settling Basins in Irrigation Network Using Simulation and Mathematical Programming, 1210
Determining the Sediment Delivery Ratio Using the Sediment-Rating Curve and a Geographic Information System–Embedded Soil Erosion Model on a Basin Scale, 1139
Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629
Effect of Adaptive Cluster Sampling Design on Accuracy of Sediment Rating Curve Estimation, 1071
Effects of Bed Load and Suspended Load on Separation of Sands and Fines in Mixed Sediment, 2058
Estimation of the Washout Depth of Fine Sediments from a Granular Bed, 1022
Estimation of Uncertainty in Long-Term Sewer Sediment Predictions Using a Response Database, 986
Evaluation of a Novel Approach to Determine the Critical Shields Stress, 1145
Fines Accumulation and Distribution in a Storm-Water Rain Garden Nine Years Postconstruction, 1292
Hydraulic Model for Sedimentation in Storm-Water Detention Basins, 672
Hydrodynamic Forces Generated on a Spherical Sediment Particle during Entrainment, 1019
Incorporation of Air Emissions in Dredging Method Selection, 2046
Integrated Planning Framework for Urban River Rehabilitation, 2029
Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717
Modeling the Time Variation of Reservoir Trap Efficiency, 1155
Particle Fluxes into Permeable Sediments: Comparison of Mechanisms Mediating Deposition, 965
Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660
Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617
Sorption of Statin Pharmaceuticals to Wastewater-Treatment Biosolids, Terrestrial Soils, and Freshwater Sediment, 638
Suspended Wash Load Transport of Nonuniform Sediments, 999
Volumetric Filtration of Rainfall Runoff. I: Event-Based Separation of Particulate Matter, 759

Sediment loads
Temporal Scales for Live-Bed Scour at Abutments, 985

Sediment transport
3D Calculations of Equilibrium Conditions in Loose-Bed Open Channels with Significant Suspended Sediment Load, 1000
Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987

Effect of Time Scale on the Performance of Different Sediment Transport Formulas in a Semiarid Region, 947

Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047

Enhancing Utility of Submerged Vanes with Collar, 1008

Estimating Alongshore Sediment Transport and the Nodal Point Location on the Delaware–Maryland Coast, 2042

Estuarine and Coastal Modeling, 2241

Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036

Hurricane Response of Nearshore Borrow Pits from Airborne Bathymetric Lidar, 2033

Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088

Influence of Vertical Resolution and Nonequilibrium Model on Three-Dimensional Calculations of Flow and Sediment Transport, 953

Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054

Monitoring Suspended Sediment Dynamics Using MBES, 945

New Empirical Method for Prediction of Sediment Distribution in Reservoirs, 1137

Sediment Entrainment at High Flow Velocity, 1001

Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004

Sediment Transport on Arbitrary Slopes: Simplified Model, 974

Sensitivity Analysis of Nonequilibrium Adaptation Parameters for Modeling Mining-Pit Migration, 1025

Temporal Scales for Live-Bed Scour at Abutments, 985

Sedimentation tanks

Hydrodynamics of Secondary Settling Tanks and Increasing Their Performance Using Baffles, 612

Two-Dimensional LDV Measurement, Modeling, and Optimal Design of Rectangular Primary Settling Tanks, 669

Seepage

Assessment of Subballast Filtration under Cyclic Loading, 921

Boundary Condition of Groundwater Flow through Sloping Seepage Face, 1129

Canal Seepage Reduction by Soil Compaction, 1252

Deformation and Cracking of Seepage Barriers in Dams due to Changes in the Pore Pressure Regime, 776

Eave Ice Dams, 77

Findings of Case Histories on the Long-Term Performance of Seepage Barriers in Dams, 775

Green-Ampt One-Dimensional Infiltration from a Ponded Surface into a Heterogeneous Soil, 1207

Impact of Storm-Water Runoff on Clogging and Fecal Bacteria Reduction in Sand Columns, 772

Membrane Behavior of Compacted Clay Liners, 907

Turbulence Characteristics in Flows Subjected to Boundary Injection and Suction, 544

Seismic analysis

Block Element Method for the Seismic Stability of Rock Slopes, 930

Decoupling Criteria for Inelastic Irregular Primary/Secondary Structural Systems Subject to Seismic Excitation, 582

Estimating the Stiffness of Eccentrically Braced Frames, 2139

Improving the Seismic Performance of Existing Buildings and Other Structures, 2259

Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593

Seismic Column Demands in Ductile Braced Frames, 2

Seismic Response and Fragility of Deteriorated Reinforced Concrete Bridges, 1733

Simplified Method for the Seismic Analysis of Masonry Shear-Wall Buildings, 1659

Simplified Procedure for Seismic Evaluation of Piles with Partial-Moment Connection to the Deck in Marine Oil Terminals, 1660

Three-Dimensional Seismic Response of a Full-Scale Light-Frame Wood Building: Numerical Study, 1611

Time-Domain Hydrodynamic Forces on Rigid Dams with Reservoir Bottom Absorption of Energy, 585

Seismic design

Behavior of Bidirectional Spring Unit in Isolated Floor Systems, 1700

Capacity Design of Intermediate Horizontal Boundary Elements of Steel Plate Shear Walls, 1673

Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751

Dimensional Response Analysis of Multistory Regular Steel MRF Subjected to Pulselike Earthquake Ground Motions, 1698

Earthquake Simulator Testing and Seismic Evaluation of Suspended Ceilings, 82

Elongation of Reinforced Concrete Members Subjected to Cyclic Loading, 1711

Estimating the Stiffness of Eccentrically Braced Frames, 2139

Externally Reinforced Welded I-Beam-to-Box-Column Seismic Connection, 461

Gateway to a Getaway, 2224

Hybrid Control Charts for Active Control and Monitoring of Concrete Strength, 1348

Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734

Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852

Optimum Design of Bridge Abutments under Seismic Conditions: Reliability-Based Approach, 112

Performance-Based Procedure for Direct Displacement Design of Engineered Wood-Frame Structures, 1704

Recommendations for Seismic Design of Hybrid Coupled Wall Systems, 2273

Seismic Column Demands in Ductile Braced Frames, 2

Seismic Design and Analysis of Buried Culverts and Structures, 1575

Seismic Design of Flexible Cantilevered Retaining Walls, 807

Seismic Design of Hybrid Coupled Wall Systems: State of the Art, 1683

Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718

Seismic Earth Pressures on Cantilever Retaining Structures, 903

Seismic Sophistication, 2191

Simplified Procedure for Seismic Evaluation of Piles with Partial-Moment Connection to the Deck in Marine Oil Terminals, 1660

A Solid Foundation, 2209

Seismic effects

Active Confinement of Reinforced Concrete Bridge Columns Using Shape Memory Alloys, 102

Aging Considerations in the Development of Time-Dependent Seismic Fragility Curves, 1753

Bidirectional Seismic Behavior of Controlled Rocking Four-Legged Bridge Steel Truss Piers, 1754

Bond Behavior in Steel Fiber-Reinforced Concrete Zones under Static and Cyclic Loading: Experimental Evaluations and Analytical Modeling, 1417

Characterization of a Roller Seismic Isolation Bearing with Supplemental Energy Dissipation for Highway Bridges, 1658

Comparative Analysis on the Seismic Behavior of Combined RC-Masonry Buildings, 1752

Comparative Assessment of Civil Infrastructure Network Performance under Probabilistic and Scenario Earthquakes, 1162

Confinement Effectiveness of FRP in Retrofitting Circular Concrete Columns under Simulated Seismic Load, 230

Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235

Design Structure Matrix Implementation on a Seismic Retrofit, 1331

Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578

Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657

Effects of Strain Localization on Seismic Active Earth Pressures, 873

Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185

Experimental Analysis of Reinforced Concrete Block Masonry Walls Subjected to In-Plane Cyclic Loading, 1653

Experimental Evaluation of Posttensioned Precast Concrete Coupling Beams, 1713

Failure Mechanisms of Pile Foundations in Liquefiable Soil: Parametric Study, 19

Feasibility Test of Adaptive Passive Control System Using MR Fluid Damper with Electromagnetic Induction Part, 484

Finite-Element Modeling of Nonlinear Behavior of Masonry-Infilled RC Frames, 1635

Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554

High Displacement Glass Seismic Systems, 2146

Highway Network Retrofit under Seismic Hazard, 1182

Impact of Different Earthquake Types on the Statistics of Ductility Demand, 1684

Improved Decentralized Method for Control of Building Structures under Seismic Excitation, 524

Improving the Seismic Performance of Existing Buildings and Other Structures, 2259

Influence of Input Motion and Site Property Variabilities on Seismic Site Response Analysis, 833

Investigation on the Impact of Seasonally Frozen Soil on Seismic Response of Bridge Columns, 139

Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116

Lateral Seismic Performance of Multipanel Precast Hollowcore Walls, 1686

Mechanisms of Seismically Induced Settlement of Buildings with Shallow Foundations on Liquefiable Soil, 788

Mechanistic Corrections for Determining the Resilient Modulus of Base Course Materials Based on Elastic Wave Measurements, 881

Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-10 (Book), 2263

Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844

Modular High-Force Seismic Magneto-Rheological Fluid Damper, 1619

On a Possible Role of Rayleigh Surface Waves in Dynamic Slope Failures, 28

Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685

Performance of Log Shear Walls Subjected to Monotonic and Reverse-Cyclic Loading, 1609

Performance Test of Energy Dissipation Bearing and Its Application in Seismic Control of a Long-Span Bridge, 153

Practical Formulas for Frequency Domain Analysis of Earthquake-Induced Dam-Reservoir Interaction, 470

Probabilistic Seismic Loss Assessment of a Vancouver High-Rise Building, 1630

Quantifying Biomediated Ground Improvement by Ureolysis: Large-Scale Biogrout Experiment, 941

Reliability Analysis of Earth Dams, 872

Retrofitting of Rectangular Columns with Deficient Lap Splices, 179

Seismic Behavior of Batter Piles: Elastic Response, 891

Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238

Seismic Damage Estimation for Buried Pipelines: Challenges after Three Decades of Progress, 1563

Seismic Displacement of Slopes Reinforced with Piles, 860

Seismic Earth Pressures on Cantilever Retaining Structures, 903

Seismic Fragility Formulations for Segmented Buried Pipeline Systems Including the Impact of Differential Ground Subsidence, 1579

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. I: Bridge Modeling, Parametric Analysis, and Retrofit Design, 137

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. II: Fragility Analysis, Fragility Curves, and Fragility Surfaces, 138

Seismic Loads, 2277

Seismic Performance Factors for Cold-Formed Steel Special Bolted Moment Frames, 1702

Seismic Performance Parameters for Reinforced Concrete-Block Shear Wall Construction, 1495

Seismic Rehabilitation of Corner RC Beam-Column Joints Using CFRP Composites, 244

Seismic Resistance Capacity of High-Rise Buildings Subjected to Long-Period Ground Motions: E-Defense Shaking Table Test, 1670

Seismic Response of FRP-Upgraded Exterior RC Beam-Column Joints, 195

Seismic Rotational Displacements of Gravity Walls by Pseudodynamic Method with Curved Rupture Surface, 21

Seismic Rotational Stability of Waterfront Retaining Wall Using Pseudodynamic Method, 16

Seismic Testing of a Bridge Steel Truss Pier Designed for Controlled Rocking, 1755

Simplified Direct Displacement Design of Six-Story Woodframe Building and Pretest Seismic Performance Assessment, 1688

State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181

Static and Cyclic Out-of-Plane Response of Masonry Walls Strengthened Using Textile-Mortar System, 1475

Tests on Seismically Damaged Reinforced Concrete Structural Walls Repaired Using Fiber-Reinforced Polymers, 236

Theoretical Studies of the XY-FP Seismic Isolation Bearing for Bridges, 154

Seismic tests

Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674

Experimental Seismic Response of a Full-Scale Light-Frame Wood Building, 1631

Experimental Seismic Response of a Full-Scale Six-Story Light-Frame Wood Building, 1732

Large-Scale Experimental Study of Precast Segmental Unbonded Posttensioned Concrete Bridge Columns for Seismic Regions, 1632

Sensitivity analysis

Assessment of Existing Structures Based on Identification, 1614

Assessment of Link Reliability as a Function of Congestion Components, 1886

Damage Identification in a Truss Tower by Regularized Model Updating, 1637

Design of Tall Formworks by a Finite-Element Model, 394

Estimation of a Sensitivity-Based Metric for Detecting Market Power, 450

Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542

Locating Nested Monitoring Wells to Reduce Model Uncertainty for Management of a Multilayer Coastal Aquifer, 1132

Multivariate Polynomial Time-Series Models and Importance Ratios to Qualify Fecal Coliform Sources, 687

Probabilistic Push-Over Analysis of Structural and Soil-Structure Systems, 1738

Probability of Failure Analysis due to Internal Corrosion in Cast-Iron Pipes, 1170

Quality Modeling of Water Distribution Systems Using Sensitivity Equations, 944

Sensitivity Analysis for an Infiltration-Runoff Model with Parameter Uncertainty, 1122

Sensitivity of Field Data Estimates in One-Dimensional Hydraulic Modeling of Channels, 983

Sensitivity of Model Parameter on Dynamic Behavior Simulation of HPC, 1485

Sensitivity of Shallow Foundation Response to Model Input Parameters, 827

Sensitivity of Untreated Reclaimed Asphalt Pavement to Moisture, Density, and Freeze Thaw, 1487

Sensitivity-Based External Calibration of Multiaxial Loading System, 478

Structural Condition Assessment of Sewer Pipelines, 1512

Structural System Parameter Selection Based on Collapse Potential of Buildings in Earthquakes, 1699

Watershed-Scale Impacts of Nitrogen from On-Site Wastewater Systems: Parameter Sensitivity and Model Calibration, 715

Separation

Nonlinear Dynamic Response of Piles under Horizontal Excitation, 929

Using Flotation to Separate Oil Spill Contaminated Beach Sands, 625

Service life

Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312

Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865

Estimation of Remaining Service Life of Flexible Pavements from Surface Deflections, 1826

Extending the Service Life of Electric Distribution and Transmission Wooden Poles Using a Wet Layup FRP Composite Strengthening System, 1537

Long-Term Field Performance of Cold In-Place Recycled Roads in Iowa, 1522

Numerical Examination of a Method for Reducing the Temperature of Municipal Solid Waste Landfill Liners, 703

Prediction of Life-Cycle Expenditure for Different Categories of Council Buildings, 1551

Probabilistic Assessment of Concrete Structure Durability under Reinforcement Corrosion Attack, 1553

Service Life Prediction for Concrete Structures by Time-Depth Dependent Chloride Diffusion Coefficient, 1477

Time-Dependent Risk Assessment of Combined Overtopping and Structural Failure for Reinforced Concrete Coastal Structures, 2038

Wood Materials, Nails, and Sheathing Connections from Early 20th Century Residential Buildings, 1469

Service loads

Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657

Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103

Serviceability

Evaluation of Vibration Assessment Criteria and Their Application to Stadium Serviceability, 1505

Inclusion of Crawl Tests and Long-Term Health Monitoring in Bridge Serviceability Analysis, 124

Long-Term Behavior of Composite Beams under Positive and Negative Bending. II: Analytical Study, 1692

Modeling Spatially Unrestricted Pedestrian Traffic on Footbridges, 1735

Vibration Serviceability of a Building Floor Structure. I: Dynamic Testing and Computer Modeling, 1546
Vibration Serviceability of a Building Floor Structure. II: Vibration Evaluation and Assessment, 1547

Settlement
Centrifuge Testing to Evaluate and Mitigate Liquefaction-Induced Building Settlement Mechanisms, 864
Experimental and Numerical Quantification of Plastic Settlement in Fresh Cementitious Systems, 1450
Experimental Study of Eccentrically Loaded Raft with Connected and Unconnected Short Piles, 909
Field Tests on Pile-Supported Embankments over Soft Ground, 850
Ground Movements around Corners of Excavations: Empirical Calculation Method, 911
Mechanisms of Seismically Induced Settlement of Buildings with Shallow Foundations on Liquefiable Soil, 788
Numerical Modeling of Geofoam Embankments, 802
Performance of North American Bioreactor Landfills. I: Leachate Hydrology and Waste Settlement, 706
Prediction of Long-Term Municipal Solid Waste Landfill Settlement Using Constitutive Model, 2110
Secondary Compression of Municipal Solid Wastes and a Compression Model for Predicting Settlement of Municipal Solid Waste Landfills, 843
Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838
Structural Analyses and Assessment of Historical Kamanlı Mosque in Izmir, Turkey, 1531
Use of Lightweight ECS as a Fill Material to Control Approach Embankment Settlements, 1409
Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871

Settling basins
Benthal Solids Properties Influencing ASB Design and Operating Practices, 633
Design of Settling Basins in Irrigation Network Using Simulation and Mathematical Programming, 1210

Sewage
Asset Management for Urban Wastewater Pipeline Networks, 1174
Sustainable Wastewater Management in Developing Countries, 2286
Treatment of Mixture of Sewage and Partially Treated Swine Wastewater by a Combination of UASB and Constructed Wetlands, 2122

Sewer pipes
Recommendations for Design of Reinforced Concrete Pipe, 1564
Structural Condition Assessment of Sewer Pipelines, 1512

Sewers
Artificial Neural Network Model for Cost Estimation: City of Edmonton's Water and Sewer Installation Services, 388
Design of a Scroll Vortex Inlet for Supercritical Approach Flow, 1030
Dimensionless Method to Characterize the Mixing Effects of Surcharged Manholes, 975
Estimation of Uncertainty in Long-Term Sewer Sediment Predictions Using a Response Database, 986
Ferrous Salt Demand for Sulfide Control in Rising Main Sewers: Tests on a Laboratory-Scale Sewer System, 742
Headworks and Headway, 2161
Junction and Drop-Shaft Boundary Conditions for Modeling Free-Surface, Pressurized, and Mixed Free-Surface Pressurized Transient Flows, 1015
Modeling Blockage Failures in Sewer Systems to Support Maintenance Decision Making, 1559
Modeling Techniques of Best Management Practices: Rain Barrels and Rain Gardens Using EPA SWMM-5, 1099
Multivariate Polynomial Time-Series Models and Importance Ratios to Qualify Fecal Coliform Sources, 687
Preventing Sewer Blowouts during High-Velocity Jet Cleaning Operations, 1191
An Urban Approach to LID, 2208

Shafts
Design of a Scroll Vortex Inlet for Supercritical Approach Flow, 1030

Shake table tests
Acceleration Tracking Performance of the UCSD-NEES Shake Table, 1656
Experimental Seismic Response of a Full-Scale Light-Frame Wood Building, 1631
Experimental Seismic Response of a Full-Scale Six-Story Light-Frame Wood Building, 1732
Feasibility Test of Adaptive Passive Control System Using MR Fluid Damper with Electromagnetic Induction Part, 484
Seismic Resistance Capacity of High-Rise Buildings Subjected to Long-Period Ground Motions: E-Defense Shaking Table Test, 1670
Shaking Table Model Tests on Pile Groups behind Quay Walls Subjected to Lateral Spreading, 820
Structural Reliability Estimation with Vibration-Based Identified Parameters, 469

Shale
Relationship between Texas Cone Penetrometer Tests and Axial Resistances of Drilled Shafts Socketed in Clay Shale and Limestone, 888
Use of Lightweight ECS as a Fill Material to Control Approach Embankment Settlements, 1409

Shallow foundations
Below-Ground Performance of Rigid Polystyrene Foam Insulation: Review of Effective Thermal Resistivity Values Used in ASCE Standard 32-01—Design and Construction of Frost-Protected Shallow Foundations, 170
Centrifuge Testing to Evaluate and Mitigate Liquefaction-Induced Building Settlement Mechanisms, 864
Sensitivity of Shallow Foundation Response to Model Input Parameters, 827

Shallow water
Coupled 1D–Quasi-2D Flood Inundation Model with Unstructured Grids, 994
Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039
Exact Sensitivity Equation for One-Dimensional Steady-State Shallow Water Flow (Application to Model Calibration), 1150
Flood Simulation Using a Well-Balanced Shallow Flow Model, 1011

Head Reconstruction Method to Balance Flux and Source Terms in Shallow Water Equations, 511

Modeling Evapotranspiration of Two Land Covers Using Integrated Hydrologic Model, 1256

Numerical Simulation of Shallow-Water Flow Using a Modified Cartesian Cut-Cell Approach, 498

Numerical Simulations of Efficiency of Curb-Opening Inlets, 948

Simplified Method for the Characterization of the Hydrograph following a Sudden Partial Dam Break, 1014

Simplified versus Detailed Two-Dimensional Approaches to Transient Flow Modeling in Urban Areas, 970

Shear

Directional Effects of Shear Combined with Compression on Bridge Elastomeric Bearings, 101

Graphical Determination of the Shear Center in Thin-Walled Asymmetrical U Profiles, 2147

Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420

Shear Performance of RC Bridge Girders Reinforced with Carbon FRP Stirrups, 98

Shear Strengthening of RC T-Beams Using Mechanically Anchored Unbonded Dry Carbon Fiber Sheets, 1497

Strengthening RC T-Beams Subjected to Combined Torsion and Shear Using FRP Fabrics: Experimental Study, 206

Shear deformation

Static Stability Formulas of a Weakened Timoshenko Column: Effects of Shear Deformations, 608

Shear failures

Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185

Finite-Element Modeling of Nonlinear Behavior of Masonry-Infilled RC Frames, 1635

Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227

Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593

Shear flow

Linear Instability Theory for Frequency Assessment of Coherent Vortices in Submerged and Aside Rigid Canopies, 1157

Shear lag

Finite Beam Element Considering Shear-Lag Effect in Box Girder, 570

Interface Behavior of a Bimaterial Plate under Dynamic Loading, 579

Shear modulus

Effect of Fine Particle Migration on the Small-Strain Stiffness of Unsaturated Soils, 834

Penetration Type Field Velocity Probe for Soft Soils, 792

Quality Assessment and Quality Control of Deep Soil Mixing Construction for Stabilizing Expansive Subsoils, 785

Shear resistance

Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227

Nonlinear Analysis of Torsionally Loaded Piles in a Two-Layer Soil Profile, 18

Plastic Behavior of Shear Tabs Welded to Flexible Wall Support, 1725

Shear Strength of Large Concrete Members with FRP Reinforcement, 240

Shear strength

Analysis of Reinforced Concrete Shells with Transverse Shear Forces, 1690

Analysis of Soil Strength Degradation during Episodes of Cyclic Loading, Illustrated by the T-Bar Penetration Test, 23

Analytical Model for Fiber-Reinforced Granular Soils under High Confining Stresses, 1448

Behavior of a Compacted Completely Decomposed Granite Soil from Suction Controlled Direct Shear Tests, 791

Behavior of Step Tapered Bored Piles in Sand under Static Lateral Loading, 839

Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003

Dilatancy and Shear Strength of Sand at Low Confining Pressures, 825

Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924

Engineered Bamboo I-Joists, 1765

Engineering Properties of Lunar Soil Simulant JSC-1A, 46

Estimation of Shear Strength of Structural Shear Walls, 1727

Experimental Observation on the Effectiveness of Fiber Sheet Strip Stirrups in Concrete Beams, 226

Geomechanical Characterization of the Volcaniclastic Material Involved in the 2002 Landslides at Stromboli, 811

Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913

In-Plane Behavior of Partially Grouted Reinforced Concrete Masonry Shear Walls, 1715

Is Matric Suction a Stress Variable?, 3

Measuring and Modeling Proportion-Dependent Stress-Strain Behavior of EPS-Sand Mixture, 34

New Approach for Modeling the Contribution of NSM FRP Strips for Shear Strengthening of RC Beams, 180

Probabilistic Analysis of Soil-Water Characteristic Curves, 817

Shear Strength Equations for Unsaturated Soil under Drying and Wetting, 832

Shear Strength in Preexisting Landslides, 868

Shear Strength of a Lightweight Self-Consolidating Concrete Bridge Girder, 152

Shear Strength of Fiber-Reinforced Sands, 821

Shear Strength of Large Concrete Members with FRP Reinforcement, 240

Shear Strength of Municipal Solid Waste, 10

Shear Strength of Steel Fiber-Reinforced Ultrahigh-Performance Concrete Beams without Stirrups, 1743

Simple Plastic Model for Shear Critical SFRC Beams, 1647

Size Effects for Reinforced Concrete Beams Strengthened in Shear with CFRP Strips, 202

State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181

Strength Measurement for Near-Seabed Surface Soft Soil Using Manually Operated Miniature Full-Flow Penetrometer, 925

Shear stress

Assessment of a River Reach for Environmental Fluid Dynamics Studies, 1034

Case Study: Effect of Submerged Aquatic Plants on Turbulence Structure in a Lowland River, 988

Depth-Averaged Shear Stress and Velocity in Open-Channel Flows, 1043

Evaluation of Unsteady Wall Shear Stress by Zielke's Method, 990

Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036

Field Studies of Discoloration in Water Distribution Systems: Model Verification and Practical Implications, 618

Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054

Shear Band Formation Observed in Ring Shear Tests on Sandy Soils, 809

Simple General Solution for Interfacial Stresses in Plated Beams, 220

Wall Shear Stress in Transient Turbulent Pipe Flow by Local Velocity Measurement, 1016

Shear tests

Behavior of a Compacted Completely Decomposed Granite Soil from Suction Controlled Direct Shear Tests, 791

Engineering Properties of Soils Reinforced by Short Discrete Polypropylene Fiber, 1493

Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693

Experimental Observation on the Effectiveness of Fiber Sheet Strip Stirrups in Concrete Beams, 226

Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913

Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905

Shear Capacity of the Flange-Web Intersections of Brick Masonry Nonrectangular Sections, 1665

Shear Strength in Preexisting Landslides, 868

Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Shear walls

Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674

Capacity Design of Intermediate Horizontal Boundary Elements of Steel Plate Shear Walls, 1673

Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751

Concept and Finite-Element Modeling of New Steel Shear Connectors for Self-Centering Wall Systems, 481

Distortional Buckling of Cold-Formed Steel Shear Wall Studs under Uplift Force, 1638

Estimation of Shear Strength of Structural Shear Walls, 1727

Experimental Evaluation of Posttensioned Precast Concrete Coupling Beams, 1713

Experimental Study on Full-Scale Light Frame Wood House under Lateral Load, 1687

Hysteresis Model of Thin Infill Plate for Cyclic Nonlinear Analysis of Steel Plate Shear Walls, 1746

In-Plane Behavior of Partially Grouted Reinforced Concrete Masonry Shear Walls, 1715

Monotonic and Reverse-Cyclic Loading of Lag Screw Connections for Log Shear Wall Construction, 1349

Performance of Log Shear Walls Subjected to Monotonic and Reverse-Cyclic Loading, 1609

Performance-Based Procedure for Direct Displacement Design of Engineered Wood-Frame Structures, 1704

Seismic Design of Hybrid Coupled Wall Systems: State of the Art, 1683

Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718

Seismic Performance Parameters for Reinforced Concrete-Block Shear Wall Construction, 1495

Simplified Direct Displacement Design of Six-Story Woodframe Building and Pretest Seismic Performance Assessment, 1688

Simplified Method for the Seismic Analysis of Masonry Shear-Wall Buildings, 1659

Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689

Structural System Parameter Selection Based on Collapse Potential of Buildings in Earthquakes, 1699

Wood Materials, Nails, and Sheathing Connections from Early 20th Century Residential Buildings, 1469

Shear waves

Analytical Solution for Biot Flow–Induced Damping in Saturated Soil during Shear Wave Excitations, 919

Characteristics of Rubber-Sand Particle Mixtures according to Size Ratio, 1376

Penetration Type Field Velocity Probe for Soft Soils, 792

Quantifying Biomediated Ground Improvement by Ureolysis: Large-Scale Biogrout Experiment, 941

Seismic Rotational Stability of Waterfront Retaining Wall Using Pseudodynamic Method, 16

Shear-Wave Velocity Correlations for Puyallup River Alluvium, 901

Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789

Sheet flow

Diffusion Wave Model for Simulating Storm-Water Runoff on Highway Pavement Surfaces at Superelevation Transition, 1020

Sheet piles

Semiempirical Approach for Estimation of DDC-Induced Deflections of Sheet Pile Walls in Peat, 1504

Structural Performance of Wood Plastic Composite Sheet Piling, 1484

Sheets

Effects of Loading Rate and Duration on Axial Behavior of Concrete Confined by Fiber-Reinforced Polymer Sheets, 190

Evaluation of Bond Strength in Concrete Elements Externally Reinforced with CFRP Sheets and Anchoring Devices, 229

Evaluation of Masonry Deep Beams Externally Strengthened with CFRP Sheets, 191

Experimental Behavior of Carbon Fiber-Reinforced Polymer (CFRP) Sheets Attached to Concrete Surfaces Using CFRP Anchors, 194

Reduced Modulus Action in U-Section Steel Sheet Pile Retaining Walls, 816

Unreinforced Concrete Masonry Walls Strengthened with CFRP Sheets and Strips under Pendulum Impact, 252

Shell structures

Accumulative Sliding Construction Method for Large-Span Latticed Shells, 428

Analysis of Reinforced Concrete Shells with Transverse Shear Forces, 1690

Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536

Shells

Closed-Form Solution of Axisymmetric Slender Elastic Toroidal Shells, 586

Dynamic Instability of Functionally Graded Shells Using Higher-Order Theory, 515

Extension of the Touratier Kinematic Model to Large Strains, Displacements, and Rotations, 587

Natural Vibrations of Open-Variable Thickness Circular Cylindrical Shells in High Temperature Field, 62

Shoaling

Experimental Study of Particle Motion on a Smooth Bed under Shoaling Waves Using Particle Image Velocimetry, 543

Laboratory Study of Low-Frequency Waves Induced by Random Gravity Waves on Sloping Beaches, 2041

Shotcrete

Forensic Investigations to Evaluate Sulfate-Induced Heave Attack on a Tunnel Shotcrete Liner, 1446

Shrinkage

Displacement Method for the Long-Term Analysis of Steel-Concrete Beams with Flexible Connection, 1633

Effect of Pore-Size Distribution on Shrinkage of Concretes, 1399

Experimental and Numerical Quantification of Plastic Settlement in Fresh Cementitious Systems, 1450

Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716

Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105

Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages, 1371

Long-Term Behavior of Composite Beams under Positive and Negative Bending. I: Experimental Study, 1691

Long-Term Behavior of Composite Beams under Positive and Negative Bending. II: Analytical Study, 1692

New Performance-Based Approach to Ensure Quality Curing during Construction, 1418

Parametric Study of Posttensioned Inverted-T Bridge System for Improved Durability and Increased Span-to-Depth Ratio, 164

Selection of Durable Closure Pour Materials for Accelerated Bridge Construction, 160

Signal processing

Modified Cross-Correlation Method for the Blind Identification of Structures, 545

p-Wave Reflection Imaging of Submerged Soil Models Using Ultrasound, 906

Silica

Comparison of Mechanical Properties for Polymer Concrete with Different Types of Filler, 1419

Silos

Flow Pattern for a Silo with Two Layers of Materials with Single or Double Openings, 899

Study of Buckling in Steel Silos under Eccentric Discharge Flows of Stored Solids, 534

Silts

Aggradation of Irrigation Canal Network in Žitný Ostrov, Southern Slovakia, 1247

Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812

Effect of Time Scale on the Performance of Different Sediment Transport Formulas in a Semiarid Region, 947

Effects of Bed Load and Suspended Load on Separation of Sands and Fines in Mixed Sediment, 2058

Experimental Study on the Stability of Railroad Silt Subgrade with Increasing Train Speed, 855

Investigation of the Thermal Conductivity of Compacted Silts and Its Correlation to the Elastic Modulus, 1386

Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905

Simulation

Acceleration Tracking Performance of the UCSD-NEES Shake Table, 1656

Autogeneration of Simulation Network of the Design Process, 303

Case Study on the Accuracy and Cost/Effectiveness in Simulating Reference Evapotranspiration in West-Central Florida, 1125

Case Study on the Evaluation of Equipment Flow at a Construction Site, 314

Compression Performance of Steel Pipelines with Welded Slip Joints, 1561

Considering Actual Pipe Connections in Water Distribution Network Analysis, 1035

Contractor Performance Evaluation for the Best Value of Superpave Projects, 374

Design of Integrated Bioinfiltration-Detention Urban Retrofits with Design Storm and Continuous Simulation Methods, 1104

Design of Settling Basins in Irrigation Network Using Simulation and Mathematical Programming, 1210

Development of a Large-Scale Traffic Simulation Model for Hurricane Evacuation—Methodology and Lessons Learned, 2091

Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578

Discrete Element Modeling of Strength Properties of Johnson Space Center (JSC-1A) Lunar Regolith Simulant, 57

Dynamic Model of an Astronaut Equipped with a Manned Maneuvering Unit in Virtual Reality, 55

Dynamic Simulation of the Maglev Vehicle/Guideway System, 120

Effect of Gradient and Its Length on Performance of Vehicles under Heterogeneous Traffic Conditions, 1909
Equivalent Barge and Flotilla Impact Forces on Bridge Piers, 144
Error Assessment for Spectral Representation Method in Wind Velocity Field Simulation, 568
Excavation Game: Computer-Aided-Learning Tool for Teaching Construction Engineering Decision Making, 1600
Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials, 1407
Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517
Flood Simulation Using a Well-Balanced Shallow Flow Model, 1011
Geotechnical Properties of JSC-1A Lunar Soil Simulant, 51
Global Dimension of Robust Project Network Design, 358
Importance of the Tail in Truck Weight Modeling for Bridge Assessment, 114
Integrated Simulation System for Construction Operation and Project Scheduling, 313
Interactive Process of Microsimulation and Logistic Regression for Short-Term Work Zone Traffic Diversion, 1816
Interbasin Water Transfer: Economic Water Quality-Based Model, 1209
Laboratory Test and Numerical Simulation of Time-Dependent Thermomechanical Behavior of the Three-Gorges Dam, 1352
Large Eddy Simulation of Flow and Tracer Transport in Multichamber Ozone Contactors, 611
Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932
Methodology for Conducting Discrete-Event Simulation Studies in Construction Engineering and Management, 315
Microscopic Traffic Simulation Approach to the Capacity Impact Analysis of Weaving Sections for the Exclusive Bus Lanes on an Urban Expressway, 1885
Microsimulation Study of Effect of Volume and Road Width on PCU of Vehicles under Heterogeneous Traffic, 1908
Microsimulation Study of the Effect of Exclusive Bus Lanes on Heterogeneous Traffic Flow, 1922
Modeling and Simulation of Traffic Movements at Semiactuated Signalized Intersections, 1847
Modeling Controlled Water Systems, 1244
Modeling Radar Rainfall Estimation Uncertainties: Random Error Model, 1084
Modeling Spatially Unrestricted Pedestrian Traffic on Footbridges, 1735
Modified Horton's Equation to Model Advance Trajectory in Furrow Irrigation Systems, 1227
Multiobjective Groundwater Remediation System Design Using Coupled Finite-Element Model and Nondominated Sorting Genetic Algorithm II, 1091
Nonparametric Simulation of Single-Site Seasonal Streamflows, 1086
Numerical Simulation of Damage Localization in Polyester Mooring Ropes, 552
Numerical Simulation of Shallow-Water Flow Using a Modified Cartesian Cut-Cell Approach, 498
Numerical Simulation of Viscoelastoplastic Land Subsidence due to Groundwater Overdrafting in Shanghai, China, 1079
Numerical Simulations of Efficiency of Curb-Opening Inlets, 948
Queuing Model for Assessing the Efficiency of Building Corridors, 76
Rating Curves for Dam-Break Flows, 1061
Real-Time Crash Risk Reduction on Freeways Using Coordinated and Uncoordinated Ramp Metering Approaches, 1832
Relative Circular Navigation Guidance for Three-Dimensional Impact Angle Control Problem, 71
Reliability-Based Design Using Two-Stage Stochastic Optimization with a Treatment of Model Prediction Errors, 603
Role of Simulation in Construction Engineering and Management, 427
Seismic Earth Pressures on Cantilever Retaining Structures, 903
Simplified Method for the Characterization of the Hydrograph following a Sudden Partial Dam Break, 1014
Simplified Numerical and Analytical Approach for Solutes in Turbulent Flow Reacting with Smooth Pipe Walls, 1005
Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045
Simulating Residential Water Demand with a Stochastic End-Use Model, 1960
Simulation-Based Analysis of Train Controls under Various Track Alignments, 1890
Simulation-Based Assessment of Vehicle Safety Behavior under Hazardous Driving Conditions, 1822
Simulation-Based Secondary Incident Filtering Method, 1868
Simulation-Optimization Framework to Support Sustainable Watershed Development by Mimicking the Predevelopment Flow Regime, 1996
Variability of the Compressive Strength of Parallel Strand Lumber, 499

Simulation models

Calibration and Verification of SHAKER, a Deterministic Toll Plaza Simulation Model, 1798
Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923
Data Consolidation from Hydroelectric Plants, 456
Enhanced Estimation of Terrestrial Loadings for TMDLs: Normalization Approach, 1995
Estimation of Capacity of Two-Lane Two-Way Highways Using Simulation Model, 1795
Experimental Analysis of Hydraulic Solver Convergence with Genetic Algorithms, 977
External Iterative Coupling Strategy for Surface-Subsurface Flow Calculations in Surface Irrigation, 1276
Grid-Enabled Simulation-Optimization Framework for Environmental Characterization, 306
Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989
River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978
Simulating the Effect of Sulfate Addition on Methylmercury Output from a Wetland, 651
Space Development Modeling of Urban Regions in Developing Countries, 1925

Singapore
Air Temperature Distribution and the Influence of Sky View Factor in a Green Singapore Estate, 1946
Controversial Strata Legislation: Catalyst for Housing Regeneration in Singapore, 1299
Empiricist Framework for TQM Implementation in Construction Companies, 1330
Modeling the Heterogeneity in Contractors' Mark-Up Behavior, 386
Perception Studies of Vertical Greenery Systems in Singapore, 1953
Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617

Site evaluation
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176
Site Characterization Model Using Artificial Neural Network and Kriging, 30

Site investigation
Behavior of an Atypical Embankment on Soft Soil: Field Observations and Numerical Simulation, 778
Importance of Mineralogy in the Geoenvironmental Characterization and Treatment of Chromite Ore Processing Residue, 823
Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth, 917

Site selection
Service Distance and Ratio-Based Location-Allocation Models for Siting Recycling Depots, 662

Site surveys
Learning from Construction Failures due to the 2009 L'Aquila, Italy, Earthquake, 1550

Size effect
Characteristics of Rubber-Sand Particle Mixtures according to Size Ratio, 1376
Mechanism behind the Size Effect Phenomenon, 465
Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes, 1389
Problems with Hu-Duan Boundary Effect Model and Its Comparison to Size-Shape Effect Law for Quasi-Brittle Fracture, 463
Size Effects for Reinforced Concrete Beams Strengthened in Shear with CFRP Strips, 202
Strength Prediction for Rounded Dovetail Connections Considering Size Effects, 494

Skewness
Record Length Requirements for Annual Maximum Flood Series, 1126

Skid resistance
Modeling Skid Resistance of Commercial Trucks on Highways, 1842
On the Study of Polishing of Road Surface under Traffic Load, 1793

Skin friction
Evaluation of Unsteady Wall Shear Stress by Zielke's Method, 990

Slabs
Fire Design of Timber-Concrete Composite Slabs with Screwed Connections, 1629
Slab-on-Grade versus Framed Slab, 94
Use of Lightweight ECS as a Fill Material to Control Approach Embankment Settlements, 1409

Slag
Capillary Shape: Influence on Water Transport within Unsaturated Alkali Activated Slag Concrete, 1369
Improvement on SIFCON Performance by Fiber Orientation and High-Volume Mineral Admixtures, 1466
Proposed Behavioral Model for Deicer Scaling Resistance of Slag Cement Concrete, 1380

Slenderness ratio
Moment-Rotation Response of Slender Steel I-Girders, 1756
Slenderness Effects on Circular CFRP Confined Reinforced Concrete Columns, 204

Sliding
Impulse Product Parameter in Landslide Generated Impulse Waves, 2043

Slip
Bond Behavior in Steel Fiber-Reinforced Concrete Zones under Static and Cyclic Loading: Experimental Evaluations and Analytical Modeling, 1417
Bond Performance of GFRP Bars in Tension: Experimental Evaluation and Assessment of *ACI 440 Guidelines*, 242
Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701
Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550
FE Modeling of FRP-Repaired Planar Concrete Elements Subjected to Monotonic and Cyclic Loading, 247
Mixed Finite Element for Three-Dimensional Nonlinear Dynamic Analysis of Rectangular Concrete-Filled Steel Tube Beam-Columns, 592
Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761

Slope stability
Beneficial Use of Shredded Tires as Drainage Material in Cover Systems for Abandoned Landfills, 2100
Bioengineering Techniques Associated with Soil Nailing Applied to Slope Stabilization and Erosion Control, 2082
Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924
Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783
Evaluation of Interslice Force Function and Discussion on Convergence in Slope Stability Analysis by the Lower Bound Method, 883
Field Infiltration Characteristics of Natural Rainfall in Compacted Roadside Slopes, 797
GeoTrends, 2249
Impacts of Unsaturated Zone Soil Moisture and Groundwater Table on Slope Instability, 914
Limit Analysis and Stability Charts for 3D Slope Failures, 831
Mastering a Mountain, 2223
Observations on Limit Equilibrium–Based Slope Reliability Problems with Inclined Weak Seams, 581

On a Possible Role of Rayleigh Surface Waves in Dynamic Slope Failures, 28
Probabilistic Assessment of Slope Stability That Considers the Spatial Variability of Soil Properties, 870
Required Unfactored Strength of Geosynthetic in Reinforced Earth Structures, 801
Resultant Force of Lateral Earth Pressure in Unstable Slopes, 934
Scour and Erosion (GSP 210), 2276
Seismic Displacement of Slopes Reinforced with Piles, 860
Shear Strength in Preexisting Landslides, 868
Stability Analysis of Strain-Softening Slope Reinforced with Stabilizing Piles, 927
Undrained Bearing Capacity of Strip Footings on Slopes, 840
Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Slopes

Analytical Study of Water Table Fluctuation in Unconfined Aquifers due to Varying Bed Slopes and Spatial Location of the Recharge Basin, 1147
Block Element Method for the Seismic Stability of Rock Slopes, 930
Boundary Condition of Groundwater Flow through Sloping Seepage Face, 1129
Estimation of Friction Factor in Open Channels, 1082
Estimation of Slope Length Value of RUSLE Factor L Using GIS, 1128
Evaluation of Microirrigation Uniformity on Laterals Considering Field Slopes, 1248
Graphical Solutions for Hillslopes: Discharge, Head, and Velocity Diagrams, 1263
Incorporating Surface Storage and Slope to Estimate Clark Unit Hydrographs for Ungauged Indiana Watersheds, 1148
Laboratory Experiments on the Failure of Coarse Homogeneous Sediment Natural Dams on a Sloping Bed, 1033
Laboratory Study of Low-Frequency Waves Induced by Random Gravity Waves on Sloping Beaches, 2041
Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136
Method of Up-Slope Mitigation Priority for Alishan Mountain Road in Taiwan, 1533
Modified Thermal Theory for Gravity Currents on Sloping Boundaries, 1028
Multicriteria Decision-Making Approach for Highway Slope Hazard Management, 1167
Sediment Transport on Arbitrary Slopes: Simplified Model, 974
Simple Method for the Design of Microirrigation Paired Laterals on Sloped Fields, 1230
Snow Loads, 2278
Undrained Lateral Pile Response in Sloping Ground, 918
Water Table Fluctuation in the Presence of a Time-Varying Exponential Recharge and Depth-Dependent ET in a Two-Dimensional Aquifer System with an Inclined Base, 1255

Slovakia

Aggradation of Irrigation Canal Network in Žitný Ostrov, Southern Slovakia, 1247

Sludge

Anaerobic Biodegradation of Polyhydroxybutyrate in Municipal Sewage Sludge, 693
Design Framework for Electrokinetically Enhanced Dewatering of Sludge, 659
Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116
Rheological Characterization of Sludges during Belt Filtration Dewatering Using an Immobilization Cell, 721
Treatment of Arsenic-Laden Water Plant Sludge by Anaerobic Digestion, 2108
Understanding the Mixing Pattern in an Anaerobic Expanded Granular Sludge Bed Reactor: Effect of Liquid Recirculation, 678

Slurries

Design Framework for Electrokinetically Enhanced Dewatering of Sludge, 659
Improvement of Problematic Soils by Lime Slurry Pressure Injection: Case Study, 915
Kinetics of SO_2 Absorption with Fly Ash Slurry with Concomitant Production of a Useful Wastewater Coagulant, 645
Numerical Simulation Software for Oil Sand Slurry Flow in Flexible Pipelines, 452

Slurry pipelines

Numerical Simulation Software for Oil Sand Slurry Flow in Flexible Pipelines, 452

Slurry walls

Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829
Tolerance and Constructability of Soldier Piles in Slurry Walls, 1507

Smart materials

Active Confinement of Reinforced Concrete Bridge Columns Using Shape Memory Alloys, 102

Snow

Long-Lead Water Supply Forecast Using Large-Scale Climate Predictors and Independent Component Analysis, 1131

Snow loads

Snow Loads, 2278

Snowmelt

Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629
Local Polynomial–Based Flood Frequency Estimator for Mixed Population, 1123
Practical Melting Forecasting of Artificial Snow Made from Treated Wastewater, 173

Social factors

Activity Awareness as an Enabler for Communication and Network Building in Construction Design Teams, 301
Affordable Housing and Social Mix: Comparative Approach, 1296
Emergence and Role of Cultural Boundary Spanners in Global Engineering Project Networks, 1329
Empirical Assessment of Internationalization Strategies for Small and Medium Construction Companies, 444
Estimating the Social and Economic Consequences of Natural Hazards: Fiscal Impact Example, 2083

Human-Environment Interactions Based on Biophilia Values in an Urban Context: Case Study, 1935
International Instruments on Housing Rights, 1294
Mechanisms for Transportation Infrastructure Investment in Developing Countries, 1927
Pisco, Peru, Earthquake of August 15, 2007, 2269
Project Organizations as Social Networks, 359
Social Vulnerability and Hurricane Impact Modeling, 2084
Understanding and Managing Three-Dimensional/Four-Dimensional Model Implementations at the Project Team Level, 389
When the Cold Wind Blows: Legal Strategies against Ghettoization in Denmark, 1297
Work Stress, Support, and Mental Health in Construction, 379

Sodium

Groundwater Classification Using Multivariate Statistical Methods: Birimian Basin, Ghana, 765

Soft soils

Behavior of an Atypical Embankment on Soft Soil: Field Observations and Numerical Simulation, 778
Embankments over Soft Clay Deposits: Contribution of Basal Reinforcement and Surface Sand Layer to Stability, 799
Field Tests on Pile-Supported Embankments over Soft Ground, 850
Free-Field Measurements to Disclose Lateral Reaction Mechanism of Piles Subjected to Soil Movements, 806
Ground Improvement and Geosynthetics (GSP 207), 2251
Monitoring and Modeling Grout Efficiency of Lifting Structure in Soft Clay, 35
Penetration Type Field Velocity Probe for Soft Soils, 792
Physical Modeling of Lateral Clay-Pipe Interaction, 867
Strength Measurement for Near-Seabed Surface Soft Soil Using Manually Operated Miniature Full-Flow Penetrometer, 925
Studies on the Behavior of Single and Group of Geosynthetic Encased Stone Columns, 786
Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871

Soil analysis

Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands, 517
Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands

Soil cement

Effect of Wetting on Unconfined Compressive Strength of Cemented Sands, 940
Filling of a Flooded Gypsum Mine with a Flowable Soil-Cement Mix, 1411
Parameters Controlling Tensile and Compressive Strength of Artificially Cemented Sand, 849
Stabilized Dredged Material. I: Parametric Study, 875
Stabilized Dredged Material. II: Geomechanical Behavior, 876
Stabilized Dredged Material. III: Mineralogical Perspective, 877

Soil compaction

Anisotropy in the Spatial Distribution of Roller-Measured Soil Stiffness, 25
Behavior of a Compacted Completely Decomposed Granite Soil from Suction Controlled Direct Shear Tests, 791
Canal Seepage Reduction by Soil Compaction, 1252
Compaction Grouting Consensus Guide, 2230
Dynamic Compaction of Collapsible Soils Based on U.S. Case Histories, 890
Geostatistical Analysis for Spatially Referenced Roller-Integrated Compaction Measurements, 853
Influence of Rocking Motion on Vibratory Roller-Based Measurement of Soil Stiffness, 546
Microporosity Structure of Coarse Granular Soils, 912

Soil compression

Consolidation of a Geosynthetic Clay Liner under Isotropic States of Stress, 798
Measuring and Modeling Proportion-Dependent Stress-Strain Behavior of EPS-Sand Mixture, 34

Soil conditions

Art of Foundation Engineering Practice (GSP 198), 2226

Soil consolidation

Buried Pipeline Response to Braced Excavation Movements, 1518
Consolidation Behavior of Soils Subjected to Asymmetric Initial Excess Pore Pressure Distributions, 31
Consolidation beneath Circular Skirted Foundations, 14
Consolidation of a Geosynthetic Clay Liner under Isotropic States of Stress, 798
Experimental and Numerical Quantification of Plastic Settlement in Fresh Cementitious Systems, 1450
Hydraulic Property Estimation Using Piezocone Results, 818
Performance of Geosynthetic-Encased Stone Columns in Embankment Construction: Numerical Investigation, 887
Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905
Probabilistic Analysis of Coupled Soil Consolidation, 814
Smear Effect and Well Resistance of PVD-Installed Ground Based on the Hyperbolic Method, 836

Soil deformation

Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578
Free-Field Measurements to Disclose Lateral Reaction Mechanism of Piles Subjected to Soil Movements, 806
Lateral Spreading Forces on Bridge Piers and Pile Caps in Laterally Spreading Soil: Effect of Angle of Incidence, 928
Micromechanical Aspects of Liquefaction-Induced Lateral Spreading, 32

Soil dynamics

Soil Dynamics and Earthquake Engineering (GSP 201), 2281

Soil erosion

Case Study of Distributed Hydrologic Model for Soil and Nutrient Loss Estimation in Small Watershed, 2102

Contact Erosion at the Interface between Granular Coarse Soil and Various Base Soils under Tangential Flow Condition, 846
Determining the Sediment Delivery Ratio Using the Sediment-Rating Curve and a Geographic Information System–Embedded Soil Erosion Model on a Basin Scale, 1139
Effect of Watershed Subdivision on SWAT Modeling with Consideration of Parameter Uncertainty, 1161
Estimation of Slope Length Value of RUSLE Factor L Using GIS, 1128
Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036
Hydrologic and Water Quality Aspects of Using a Compost/Mulch Blend for Erosion Control, 1272
Scour and Erosion (GSP 210), 2276

Soil liquefaction

Centrifuge Testing to Evaluate and Mitigate Liquefaction-Induced Building Settlement Mechanisms, 864
CPT-Based Evaluation of Liquefaction and Lateral Spreading in Centrifuge, 904
Evaluation of Flow Liquefaction and Liquefied Strength Using the Cone Penetration Test, 856
Failure Mechanisms of Pile Foundations in Liquefiable Soil: Parametric Study, 19
Mechanisms of Seismically Induced Settlement of Buildings with Shallow Foundations on Liquefiable Soil, 788
Micromechanical Aspects of Liquefaction-Induced Lateral Spreading, 32
Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905
Probabilistic Performance-Based Procedure to Evaluate Pile Foundations at Sites with Liquefaction-Induced Lateral Displacement, 819
Shaking Table Model Tests on Pile Groups behind Quay Walls Subjected to Lateral Spreading, 820
Simplified Approximation Procedure for Performance-Based Evaluation of Liquefaction Potential, 787
Validation and Application of Empirical Liquefaction Models, 931
Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789
Weighted Residual Numerical Differentiation Algorithm Applied to Experimental Bending Moment Data, 857

Soil mechanics

Geoenvironmental Engineering and Geotechnics (GSP 204), 2246
Geotechnical Problems of Cultural Heritage due to Floods, 1541
Is Construction Blasting Still Abnormally Dangerous?, 1311
Is Matric Suction a Stress Variable?, 3
Shear Strength in Preexisting Landslides, 868
Soil Behavior and Geo-Micromechanics (GSP 200), 2280

Soil mixing

Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096
Quality Assessment and Quality Control of Deep Soil Mixing Construction for Stabilizing Expansive Subsoils, 785

Soil nailing

Bioengineering Techniques Associated with Soil Nailing Applied to Slope Stabilization and Erosion Control, 2082

Soil permeability

Assessment of Subballast Filtration under Cyclic Loading, 921
Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665
Evolution of the Pore-Pressure Field around a Moving Conical Penetrometer of Finite Size, 485
Standard Guideline for the Geostatistical Estimation and Block-Average of Homogeneous and Isotropic Saturated Hydraulic Conductivity, 2282

Soil pollution

Analysis of Regulatory Guidance Values for Residential Surface Soil Arsenic Exposure, 709
Clean up of Petroleum-Hydrocarbon Contaminated Soils Using Enhanced Bioremediation System: Laboratory Feasibility Study, 681
Effect of Cocontaminants on the Remediation of PCB-Impacted Soils by Hydrogen Peroxide, 2127
Effectiveness of Moisture and Fixatives in Controlling Mobility of Contaminated Soil Particles by Wind Forces, 2119
Efficient Microwave Technology to Immobilize Heavy Metal Copper (Cu) Contaminated Soil by Microwave Energy, 2097
Ground Improvement and Geosynthetics (GSP 207), 2251
Microwave-Enhanced Thermal Desorption of Polyhalogenated Biphenyls from Contaminated Soil, 643
Practical Method to Extract and Dechlorinate PCBs in Soils, 2105
Study on Pb and PAHs Emission Levels of Heavy Metals- and PAHs-Contaminated Soil during Thermal Treatment Process, 621

Soil properties

Comparison of Ordinary Kriging, Regression Kriging, and Cokriging Techniques to Estimate Soil Salinity Using LANDSAT Images, 1240
Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924
Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822
Engineering Properties of Soils Reinforced by Short Discrete Polypropylene Fiber, 1493
Exploring the Relationship between Soil Properties and Deterioration of Metallic Pipes Using Predictive Data Mining Methods, 288
Geotechnical Properties of JSC-1A Lunar Soil Simulant, 51
Influence of Input Motion and Site Property Variabilities on Seismic Site Response Analysis, 833
Interplay between Field Measurements and Soil Behavior for Capturing Supported Excavation Response, 781
Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties, 12
Performance Evaluation and Uncertainty Measurement in Irrigation Scheduling Soil Water-Balance Approach, 1280
Probabilistic Assessment of Slope Stability That Considers the Spatial Variability of Soil Properties, 870

Simple Yield Surface Expressions Appropriate for Soil Plasticity, 29

Soil Behavior and Geo-Micromechanics (GSP 200), 2280

Time Effects Relate to Crushing in Sand, 893

Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916

Soil stabilization

Addressing Sulfate-Induced Heave in Lime Treated Soils, 784

Analytical Model for Fiber-Reinforced Granular Soils under High Confining Stresses, 1448

Design and Performance of a 46-m-High MSE Wall, 851

Development and Validation of a Two-Phase Model for Reinforced Soil by Considering Nonlinear Behavior of Matrix, 530

Dynamic Compaction of Collapsible Soils Based on U.S. Case Histories, 890

Effect of Sand Columns on the Undrained Load Response of Soft Clays, 898

Engineering Properties of Soils Reinforced by Short Discrete Polypropylene Fiber, 1493

Evaluation of Surface Water Runoff from Fly Ash–Stabilized and Nonstabilized Soil Surfaces, 716

Filling of a Flooded Gypsum Mine with a Flowable Soil-Cement Mix, 1411

Finite-Element Simulations of Full-Scale Modular-Block Reinforced Soil Retaining Walls under Earthquake Loading, 523

Ground Improvement and Geosynthetics (GSP 207), 2251

Improvement of Problematic Soils by Lime Slurry Pressure Injection: Case Study, 915

Influence of Relative Density of Soil on Performance of Geocell-Reinforced Sand Foundations, 1400

Investigation of Laboratory Procedure for Evaluating Chemical Dust Palliative Performance, 1472

Performance of Geosynthetic-Encased Stone Columns in Embankment Construction: Numerical Investigation, 887

Required Unfactored Strength of Geosynthetic in Reinforced Earth Structures, 801

Stabilized Dredged Material. I: Parametric Study, 875

Stabilized Dredged Material. II: Geomechanical Behavior, 876

Stabilized Dredged Material. III: Mineralogical Perspective, 877

Studies on the Behavior of Single and Group of Geosynthetic Encased Stone Columns, 786

Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871

Soil strength

Effect of Wetting on Unconfined Compressive Strength of Cemented Sands, 940

Soil structures

Effect of Wetting on Unconfined Compressive Strength of Cemented Sands, 940

Evaluation of Flow Liquefaction and Liquefied Strength Using the Cone Penetration Test, 856

Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852

Probabilistic Push-Over Analysis of Structural and Soil-Structure Systems, 1738

Required Unfactored Strength of Geosynthetic in Reinforced Earth Structures, 801

Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854

State Boundary Surfaces for an Aged Compacted Clay, 897

Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103

Soil suction

Establishing Soil-Water Characteristic Curve of a Fine-Grained Soil from Electrical Measurements, 847

Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas, 826

Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas

Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Soil tests

Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas, 826

Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas

Soil treatment

Clean up of Petroleum-Hydrocarbon Contaminated Soils Using Enhanced Bioremediation System: Laboratory Feasibility Study, 681

Effect of Cocontaminants on the Remediation of PCB-Impacted Soils by Hydrogen Peroxide, 2127

Removal of Hexachlorobenzene and Phenanthrene from Clayey Soil by Surfactant- and Ultrasound-Assisted Electrokinetics, 696

Soil water

Centrifuge Permeameter for Unsaturated Soils. I: Theoretical Basis and Experimental Developments, 878

Centrifuge Permeameter for Unsaturated Soils. II: Measurement of the Hydraulic Characteristics of an Unsaturated Clay, 879

Correspondence between the Campbell and van Genuchten Soil-Water-Retention Models, 1262

Effect of Wetting on Unconfined Compressive Strength of Cemented Sands, 940

Effectiveness of Moisture and Fixatives in Controlling Mobility of Contaminated Soil Particles by Wind Forces, 2119

Establishing Soil-Water Characteristic Curve of a Fine-Grained Soil from Electrical Measurements, 847

Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills, 1064

Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills

Evaluation of a Dielectric Sensor for Measurement of Soil-Water Electrical Conductivity, 1261

Experimental Study on Moisture Migration in Unsaturated Loess under Effect of Temperature, 172

Impacts of Unsaturated Zone Soil Moisture and Groundwater Table on Slope Instability, 914

Inverse Method for Estimating the Spatial Variability of Soil Particle Size Distribution from Observed Soil Moisture, 1149

Knowledge-Based Model for Supplementary Irrigation Assessment in Agricultural Watersheds, 1242

Performance Evaluation and Uncertainty Measurement in Irrigation Scheduling Soil Water-Balance Approach, 1280
Probabilistic Analysis of Soil-Water Characteristic Curves, 817
Quality Control of Soil Water Data in Applied Climate Information System—Case Study in Nebraska, 1076
Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220
Soil Moisture Measurements: Comparison of Instrumentation Performances, 1208
Soil Moisture Profile Development from Surface Observations by Principle of Maximum Entropy, 1089

Soil-pile interactions

Free-Field Measurements to Disclose Lateral Reaction Mechanism of Piles Subjected to Soil Movements, 806
Group Interaction Effects on Laterally Loaded Piles in Clay, 830
Nonlinear Dynamic Response of Piles under Horizontal Excitation, 929
Reliability Analysis of Buried Flexible Pipe-Soil Systems, 1565
Role of Linear Elasticity in Pile Group Analysis and Load Test Interpretation, 937
Stability Analysis of Strain-Softening Slope Reinforced with Stabilizing Piles, 927
Undrained Lateral Pile Response in Sloping Ground, 918

Soil-pipe interactions

Analysis of Soil Strength Degradation during Episodes of Cyclic Loading, Illustrated by the T-Bar Penetration Test, 23
Parametric Solutions for Slide Impact on Pipelines, 866

Soils

Assessment of Subballast Filtration under Cyclic Loading, 921
Characterization of Rutting (Permanent Strain) Development of A-2-4 and A-4 Subgrade Soils under the HVS Loading, 1534
Engineering Properties of Lunar Soil Simulant JSC-1A, 46
Improved Design of Embedment Depths for Transmission Pole Foundations Subject to Lateral Loading, 2137
Influence of Water on the Compression Behavior of Decomposed Granite Soil, 842
Laboratory-Scale Flotation Process for Treatment of Soils Contaminated with Both PAH and Lead, 728
p-Wave Reflection Imaging of Submerged Soil Models Using Ultrasound, 906

Soil-structure interactions

Centrifuge Testing to Evaluate and Mitigate Liquefaction-Induced Building Settlement Mechanisms, 864
Complex Frequencies in Elastodynamics, with Application to the Damping-Solvent Extraction Method, 522
Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517
Expert System Approach for Soil Structure Interaction and Land Use, 1931
Forced Vertical Vibration of Rigid Circular Disc on a Transversely Isotropic Half-Space, 548
Investigation on the Impact of Seasonally Frozen Soil on Seismic Response of Bridge Columns, 139
Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932
Mechanisms of Seismically Induced Settlement of Buildings with Shallow Foundations on Liquefiable Soil, 788
Nonlinear Efficiency of Bored Pile Group under Lateral Loading, 936
Physical Modeling of Lateral Clay-Pipe Interaction, 867
Practical Subgrade Model for Improved Soil-Structure Interaction Analysis: Software Implementation, 2157
Reduced Modulus Action in U-Section Steel Sheet Pile Retaining Walls, 816
Seismic Behavior of Batter Piles: Elastic Response, 891
Seismic Design and Analysis of Buried Culverts and Structures, 1575
Soil Dynamics and Earthquake Engineering (GSP 201), 2281
Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854
Tunneling beneath Buried Pipes: View of Soil Strain and Its Effect on Pipeline Behavior, 935
Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills, 123
Vertical Vibrations of a Rigid Foundation Embedded in a Poroelastic Half Space, 497

Solar power

Development and Testing of a Fluorescent Fiber Solar Concentrator for Remote Daylighting, 455
Modeling Evapotranspiration Effects on Air Flowing in a Small Glass Roofed Tunnel, 1236
Sustainable Electric Power System: Is It Possible? Case Study: Croatia, 458

Solid wastes

Aluminum Reactions and Problems in Municipal Solid Waste Landfills, 2126
Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865
Compaction Characteristics of Municipal Solid Waste, 882
Considering Carbon Capture and Storage for Energy Generation from Municipal Solid Waste, 698
Dual-Interval Fuzzy Stochastic Programming Method for Long-Term Planning of Municipal Solid Waste Management, 279
Effect of Forced Aeration and Mechanical Turning on Leachate Quantity and Quality from Glass Cullet Stockpiles, 708
Evaluating the Mobility of Arsenic in Synthetic Iron-Containing Solids Using a Modified Sequential Extraction Method, 635
Geotechnical Characterization Field Measurement, and Laboratory Testing of Municipal Solid Waste, 2248
Guideline for Monitoring Stormwater Gross Solids, 2252
Integrated Fuzzy Ranking Analysis for Assessing the Quality of Composting Products, 670
Performance of North American Bioreactor Landfills. I: Leachate Hydrology and Waste Settlement, 706
Performance of North American Bioreactor Landfills. II: Chemical and Biological Characteristics, 707

Physical Characterization of Municipal Solid Waste for Geotechnical Purposes, 895
Prediction of Long-Term Municipal Solid Waste Landfill Settlement Using Constitutive Model, 2110
Secondary Compression of Municipal Solid Wastes and a Compression Model for Predicting Settlement of Municipal Solid Waste Landfills, 843
Shear Strength of Municipal Solid Waste, 10
Sorption of Cr (VI) onto Olive Stone in a Packed Bed Column: Prediction of Kinetic Parameters and Breakthrough Curves, 766
Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704

Solidification
Contaminant Leaching from Stabilized/Solidified Acid Tars, 764

Solids flow
Large Deformation Finite-Element Analysis of Submarine Landslide Interaction with Embedded Pipelines, 27
Mean Velocity of Mudflows and Debris Flows, 1012
Study of Buckling in Steel Silos under Eccentric Discharge Flows of Stored Solids, 534

Solitary waves
New Methodology for Laboratory Generation of Solitary Waves, 2055

Solutes
Analytical Solution for Two-Dimensional Solute Transport in Finite Aquifer with Time-Dependent Source Concentration, 590
Dimensionless Method to Characterize the Mixing Effects of Surcharged Manholes, 975
Effective Porosity Measurement of a Marine Clay, 689
Evaluation of Apparatus for Membrane Cleaning Tests, 740
Nonuniform and Unsteady Solute Transport in Furrow Irrigation. I: Model Development, 1241

Solvents
Development and Evaluation of the Hard-Grade Asphalt, 1432
Practical Method to Extract and Dechlorinate PCBs in Soils, 2105

Sorption
Biosorptive Color Removal: Applicability of Equilibrium Isotherm Models, 2098
Competitive Sorption of Pesticides onto Treated Wood Charcoal and the Effect of Organic and Inorganic Parameters on Adsorption Capacity, 732
Development of a Kinetic Model for the Biosorption of Cationic Dyes by Dead Macrofungi, 667
Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116
Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages, 1371
New Approach: Waste Materials as Sorbents for Arsenic Removal from Water, 753
Sorption of Cr (VI) onto Olive Stone in a Packed Bed Column: Prediction of Kinetic Parameters and Breakthrough Curves, 766
Sorption of Statin Pharmaceuticals to Wastewater-Treatment Biosolids, Terrestrial Soils, and Freshwater Sediment, 638

South Africa
Modeling Evapotranspiration Effects on Air Flowing in a Small Glass Roofed Tunnel, 1236

South Carolina
Gateway to a Getaway, 2224
Numerical Age and Residence-Time Mapping for a Small Tidal Creek: Case Study, 2049

Space construction
Earth and Space 2010, 2236

Space exploration
Earth and Space 2010, 2236
Geotechnical Properties of NT-LHT-2M Lunar Highland Simulant, 63
Preimpact Configuration Analysis of Dual-Arm Space Manipulator Capturing Object, 52
Variational Technique for Spacecraft Trajectory Planning, 56

Spacecraft
Preimpact Configuration Analysis of Dual-Arm Space Manipulator Capturing Object, 52
Variational Technique for Spacecraft Trajectory Planning, 56

Spacecraft launching
Railgun Space Launcher, 70

Spacing
Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550
Optimal Spacing in an Array of Fully Penetrating Ditches for Subsurface Drainage, 1206

Spain
Dynamic Analysis of a Composite Cable-Stayed Bridge: Escaleritas Viaduct, 156
Irrigation Distribution Networks' Vulnerability to Climate Change, 1253

Spatial analysis
Comparison of Spatial Interpolation Methods for Water Quality Evaluation in the Chesapeake Bay, 627
Detecting Unsafe Roadways with Spatial Statistics: Point Patterns and Geostatistical Models, 1836
Inverse Method for Estimating the Spatial Variability of Soil Particle Size Distribution from Observed Soil Moisture, 1149
Quantification of Spatial Temporal Congestion in Four-Dimensional Computer-Aided Design, 378
Quantitative Delimitation of Metropolitan Areas Based on a Synthetic Method: Case Study in the Lanzhou Metropolitan Area, 1956
Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth, 917

Spatial data
Detecting Unsafe Roadways with Spatial Statistics: Point Patterns and Geostatistical Models, 1836
Space Development Modeling of Urban Regions in Developing Countries, 1925

Spatial distribution
Anisotropy in the Spatial Distribution of Roller-Measured Soil Stiffness, 25
Detecting Unsafe Roadways with Spatial Statistics: Point Patterns and Geostatistical Models, 1836
Distribution and Trends in Reference Evapotranspiration in the North China Plain, 1226

Specifications
Effect of Contamination on Reinforcing Bar-Concrete Bond, 1515
Relaxing the Stud Spacing Limit for Full-Depth Precast Concrete Deck Panels Supported on Steel Girders (Phase I), 140
Shear Characteristics and Design for High-Strength Self-Consolidating Concrete, 1705
Web-Based Construction Project Specification System, 281

Spectral analysis
Blast Limits for Transmission Structures. II: Structural Response and Blast Limit Development, 1501
Error Assessment for Spectral Representation Method in Wind Velocity Field Simulation, 568
Identification of Nearshore Wave Characteristics Using Robotic Total Stations, 1787
Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734
Laboratory Study of Unidirectional Focusing Waves in Intermediate Depth Water, 467
Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

Speed
Experimental Study on the Stability of Railroad Silt Subgrade with Increasing Train Speed, 855

Spheres
Comparison between Coupled and Uncoupled Consolidation Analysis of a Rigid Sphere in a Porous Elastic Infinite Space, 564

Spillways
Chute Aerators. I: Air Transport Characteristics, 980
Chute Aerators. II: Hydraulic Design, 981
Hydrodynamic Forces on Spillway Torque-Tube Gates, 1013
Ka Loko Dam Break, 1310

Splitting
Direct Tension Pullout Bond Test: Experimental Results, 1680

Sprinkler irrigation
Comparison of Different Irrigation Methods Based on the Parametric Evaluation Approach in Abbas Plain: Iran, 1213

Stability
Dynamic Instability of Functionally Graded Shells Using Higher-Order Theory, 515
Experimental Study on the Stability of Railroad Silt Subgrade with Increasing Train Speed, 855
Explicit Pseudodynamic Algorithm with Improved Stability Properties, 519
Geometrically Nonlinear Analysis of Plane Frames Subjected to Temperature Changes, 1739
Influence of Relative Roughness and Reynolds Number on the Roll-Waves Spatial Evolution, 943
Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands, 517
Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands
Linear Instability Theory for Frequency Assessment of Coherent Vortices in Submerged and Aside Rigid Canopies, 1157
Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844
Nonlinear, Large Deformation Finite-Element Beam/Column Formulation for the Study of the Human Spine: Investigation of the Role of Muscle on Spine Stability, 591
Ranking Binder Creep Performance Using the ARRB Elastometer, 1391
Stability Analysis of Direct Integration Algorithms Applied to MDOF Nonlinear Structural Dynamics, 508

Stabilization
Bench-Scale Evaluation of Chemically Bonded Phosphate Ceramic Technology to Stabilize Mercury Waste Mixtures, 639
Compaction Characteristics and Bearing Ratio of Pond Ash Stabilized with Lime and Phosphogypsum, 1378
Contaminant Leaching from Stabilized/Solidified Acid Tars, 764
Performance Problems and Stabilization Techniques for Granular Shoulders, 1511

Stadiums
Emphasis on Expansion, 2206
Evaluation of Vibration Assessment Criteria and Their Application to Stadium Serviceability, 1505
Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326
Super Span (SuperSpan), 2160
Super Span (SuperSpan)

Stainless steel
Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Experimental Investigations, 1643
Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Design, 1644

Standardization
Exchange Model and Exchange Object Concepts for Implementation of National BIM Standards, 264

Standards and codes
Analysis of Wind-Induced Clip Loads on Standing Seam Metal Roofs, 1641
Automated Code Compliance Checking for Building Envelope Design, 280
Compaction Grouting Consensus Guide, 2230
Deficiency Analysis of Coastal Buildings toward Storm Damage Reduction, 1508
Earthquake Simulator Testing and Seismic Evaluation of Suspended Ceilings, 82
Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693
Horizontal Wind Loads on Open-Frame, Low-Rise Buildings, 1615
Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-10 (Book), 2263
Reliability-Based Evaluation of Flexural Members Strengthened with Externally Bonded Fiber-Reinforced Polymer Composites, 1721
Seismic Loads, 2277

Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714

Snow Loads, 2278

"Three Little Pigs" Project: Hurricane Risk Mitigation by Integrated Wind Tunnel and Full-Scale Laboratory Tests, 2093

Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681

Wind-Induced Pressures on Patio Covers, 1723

State government

Longitudinal Study of Innovative Contracting Practices in State Departments of Transportation, 1303

Special Report: The Infrastructure Roundtables: Concluding Thoughts—Develop Federal, Regional, and State Infrastructure Plans, 2182

Special Report: The Infrastructure Roundtables: Develop Federal, Regional, and State Infrastructure Plans, 2176

Special Report: The Infrastructure Roundtables: Increase Infrastructure Investment at All Levels of Government, 2178

State-of-the-art reviews

Review of Bioretention System Research and Design: Past, Present, and Future, 710

Static loads

Aerostatic Reliability Analysis of Long-Span Bridges, 119

Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672

Statistics

Analysis of Regulatory Guidance Values for Residential Surface Soil Arsenic Exposure, 709

Anisotropy in the Spatial Distribution of Roller-Measured Soil Stiffness, 25

Application of Two-Directional Time Series Models to Replace Missing Data, 661

Artificial Intelligence Techniques as Detection Tests for the Identification of Shifts in Hydrometric Data, 298

Assessment of Flooding Risk to Cultural Heritage in Historic Sites, 1539

Capacity Reduction and Fire Load Factors for Design of Steel Members Exposed to Fire, 1758

Comparison of Spatial Interpolation Methods for Water Quality Evaluation in the Chesapeake Bay, 627

Cost Savings Analysis of Performance-Based Contracts for Highway Maintenance Operations, 1189

Detecting Unsafe Roadways with Spatial Statistics: Point Patterns and Geostatistical Models, 1836

Development of Railway Track Geometry Indexes Based on Statistical Distribution of Geometry Data, 1862

Factors Affecting Driver Speed Choice along Two-Lane Rural Highway Transition Zones, 1869

Frequency of Change Orders in Highway Construction Using Alternate Count-Data Modeling Methods, 403

Geostatistical Analysis for Spatially Referenced Roller-Integrated Compaction Measurements, 853

Horizontal Curve Accident Modification Factor with Consideration of Driveway Density on Rural Four-Lane Highways in Texas, 1877

Improving Planning Reliability and Project Performance Using the Reliable Commitment Model, 426

Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138

Multicriteria Group Decision-Making Technique for a Low-Class Road Maintenance Program, 1183

Multivariate Statistical Approach to Structural Damage Detection, 460

Prediction of Extreme Response Statistics of Narrow-Band Random Vibrations, 488

Preventing Sewer Blowouts during High-Velocity Jet Cleaning Operations, 1191

Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319

Rational Three-Step Method for Optimizing Value of Civil Engineering Research, 1322

Research Validation: Challenges and Opportunities in the Construction Domain, 327

Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572

Right Turns on Green and Pedestrian Level of Service: Statistical Assessment, 1

Roadway Lighting Shows Safety Benefits at Rural Intersections, 1891

Simulating Residential Water Demand with a Stochastic End-Use Model, 1960

Standard Guideline for the Geostatistical Estimation and Block-Average of Homogeneous and Isotropic Saturated Hydraulic Conductivity, 2282

Statistical Analysis on the Cost and Duration of Public Building Projects, 1327

Statistical Evaluation of Factors Affecting Indicator Bacteria in Urban Storm-Water Runoff, 763

Statistical Modeling of the Monthly Palmer Drought Severity Index, 1135

Statistical Moments of Polynomial Dimensional Decomposition, 549

Statistical Properties of Strain and Rotation Tensors in Geodetic Network, 1778

Stochastic Free Vibration Response of Soft Core Sandwich Plates Using an Improved Higher-Order Zigzag Theory, 40

Three-Stage Least-Squares Analysis of Time and Cost Overruns in Construction Contracts, 434

Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916

What Is the Role of Multiple Secondary Incidents in Traffic Operations?, 1895

Steady flow

Accuracy of Kinematic Wave and Diffusion Wave Approximations for Flood Routing. I: Steady Analysis, 7

Turbulence Characteristics in Flows Subjected to Boundary Injection and Suction, 544

Two-Dimensional Simulation of Subcritical Flow at a Combining Junction: Luxury or Necessity?, 1024

Steel

Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188

Analytical Studies of Concrete-Filled Circular Steel Tubes under Axial Compression, 1664

Calibration of the SMCS Criterion for Ductile Fracture in Steels: Specimen Size Dependence and Parameter Assessment, 598

Capacity Reduction and Fire Load Factors for Design of Steel Members Exposed to Fire, 1758

Comparison of Block-Shear and Whitmore Section Methods for Load Rating Existing Steel Truss Gusset Plate Connections, 110

Concept and Finite-Element Modeling of New Steel Shear Connectors for Self-Centering Wall Systems, 481

Damping Parameter Identification and Study of Metal Foam Filled Steel Tube, 1384

End Forces on Crossframes in Horizontally Curved Steel I-Girder Bridges, 2130

Engineering the Tower and Main Span Construction of Stonecutters Bridge, 108

Estimating the Stiffness of Eccentrically Braced Frames, 2139

Evaluation of the Low-Cycle Fatigue Life in ASTM A706 and A615 Grade 60 Steel Reinforcing Bars, 1347

Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693

Experimental Investigation of the Axial Capacity of Inelastically Pretwisted Steel Bars, 560

Externally Reinforced Welded I-Beam-to-Box-Column Seismic Connection, 461

Mechanical Behavior of an Innovative Hybrid Beam Made of Glulam and Ultrahigh-Performance Concrete Reinforced with FRP or Steel, 197

Modeling and Behavior of Steel Plate Connections Subject to Various Fire Scenarios, 1696

Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626

Moment-Rotation Response of Slender Steel I-Girders, 1756

Plastic Behavior of Shear Tabs Welded to Flexible Wall Support, 1725

Progressive Collapse Resistance of Steel-Concrete Composite Floors, 1724

Proposed Method for Determining the Interval for Hands-on Inspection of Steel Bridges with Fracture Critical Members, 127

Pullout Behavior of Steel Fibers in Self-Compacting Concrete, 1340

Rotation Requirements for Moment Redistribution in Steel Bridge I-Girders, 121

Safety Assessment of a Steel Frame Using LRFD and SBRA Methods, 2136

Simple Model for the Cyclic Behavior of Smooth Sand-Steel Interfaces, 874

Simple Plastic Model for Shear Critical SFRC Beams, 1647

Simplified Model for Compressive Behavior of Concrete Columns Strengthened by Steel Angles and Strips, 482

Structural Applications of Steel Cables for Buildings, 2283

Study of Stress Intensity Factor of a Cracked Steel Plate with a Single-Side CFRP Composite Patching, 254

Time-Dependent Behavior of Concrete-Filled Steel Tubular Arch Bridge, 104

Tire-Derived Steel for Hydrogen Sulfide Removal in Landfill Cover, 2118

Upper Bound Plastic Interaction Relations for Elliptical Hollow Sections, 559

Steel beams

Behavior of Prestressed Steel Beams, 1719

Design and Costs for Simple-Made-Continuous Rolled Steel Girder Bridges: Literature Survey, 2153

Recommendations for Seismic Design of Hybrid Coupled Wall Systems, 2273

Unified Flexural Resistance Equations for Stability Design of Steel I-Section Members: Overview, 8

Steel columns

Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740

Nonlinear Finite-Element Analysis for Hysteretic Behavior of Thin-Walled Circular Steel Columns with In-Filled Concrete, 1745

Seismic Column Demands in Ductile Braced Frames, 2

Steel frames

Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701

Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames, 1655

Nonlinear Analysis of Composite Beams with Partial Interaction in Steel Frame Structures at Elevated Temperature, 1703

Reduced Link Sections for Improving the Ductility of Eccentrically Braced Frame Link-to-Column Connections, 1662

Seismic Column Demands in Ductile Braced Frames, 2

Seismic Performance Factors for Cold-Formed Steel Special Bolted Moment Frames, 1702

Steel piles

Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97

Reduced Modulus Action in U-Section Steel Sheet Pile Retaining Walls, 816

Steel pipes

Compression Performance of Steel Pipelines with Welded Slip Joints, 1561

Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578

Steel plates

Capacity Design of Intermediate Horizontal Boundary Elements of Steel Plate Shear Walls, 1673

Cyclic Behavior of Shear Links of Various Grades of Plate Steel, 1645

Fatigue Performance of Tension Steel Plates Strengthened with Prestressed CFRP Laminates, 237

Hysteresis Model of Thin Infill Plate for Cyclic Nonlinear Analysis of Steel Plate Shear Walls, 1746

Steel structures

Building Robustness Research during World War II, 1549

Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Experimental Investigations, 1643

Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Design, 1644
Fragility Assessment of Reduced Beam Section Moment Connections, 1720
High-Temperature Properties of Steel for Fire Resistance Modeling of Structures, 1388
Reducing Brittle and Fatigue Failures in Steel Structures, 2274
Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854
Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103
Unified Element and Section Approach to Design of Cold-Formed Steel Structures, 1642

Stiffening

Cyclic Behavior of Shear Links of Various Grades of Plate Steel, 1645
Deflection Prediction for FRP-Strengthened Concrete Beams, 200
Experiments on the Buckling Behavior of Ring-Stiffened Pipelines under Hydrostatic Pressure, 505
Laboratory Evaluation of Moisture Susceptibility of Hot-Mix Asphalt Containing Cementitious Fillers, 1416
Torsional Strength of RC Beams Considering Tension Stiffening Effect, 1741

Stiffness

Anisotropy in the Spatial Distribution of Roller-Measured Soil Stiffness, 25
Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509
Characteristics of Rubber-Sand Particle Mixtures according to Size Ratio, 1376
Characterization of Cementitiously Stabilized Granular Materials for Pavement Design Using Unconfined Compression and IDT Testings with Internal Displacement Measurements, 1396
Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198
Deflection Prediction for FRP-Strengthened Concrete Beams, 200
Dynamic Properties of Lightweight Concrete Beams Made by Sedimentary Lightweight Aggregate, 1408
Effect of Fine Particle Migration on the Small-Strain Stiffness of Unsaturated Soils, 834
Engineered Bamboo I-Joists, 1765
Estimating the Stiffness of Eccentrically Braced Frames, 2139
Experimental Investigation of Bending Fatigue Response of Grouted Stay Cables, 106
Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477
Finite Beam Element Considering Shear-Lag Effect in Box Girder, 570
Free-Field Measurements to Disclose Lateral Reaction Mechanism of Piles Subjected to Soil Movements, 806
FRP-Retrofitted URM Walls under In-Plane Shear: Review and Assessment of Available Models, 249
Geometrically Nonlinear Analysis of Plane Frames Subjected to Temperature Changes, 1739
Influence of Rocking Motion on Vibratory Roller-Based Measurement of Soil Stiffness, 546
In-Plane Stiffness of Semiauxetic Laminates, 576
Interface Shear Connection Analysis of Ultrahigh-Performance Fiber-Reinforced Concrete Composite Girders, 141
Linearly Implicit Time Integration Methods for Real-Time Dynamic Substructure Testing, 596
Load Transfer Characteristics of Aggregate Interlocking in Concrete Pavement, 1810
Mechanical Behavior of an Innovative Hybrid Beam Made of Glulam and Ultrahigh-Performance Concrete Reinforced with FRP or Steel, 197
Multiple Scales Solution for a Beam with a Small Bending Stiffness, 466
Nonlinear Cone Penetration Test-Based Method for Predicting Footing Settlements on Sand, 813
Research on High- and Low-Temperature Properties of Asphalt-Mineral Filler Mastic, 1434
Stiffness Degradation and Time to Cracking of Cover Concrete in Reinforced Concrete Structures Subject to Corrosion, 480
Strength and Stiffness of Circular Concrete-Filled Tubes, 1757
Stress-Strain Responses of Block Samples of Compressible Chicago Glacial Clays, 790
Structural Performance of Wood Plastic Composite Sheet Piling, 1484
Tensile Stiffness and Deformation Model of Rubber Isolators in Tension and Tension-Shear States, 501
Unified Approach to the Characterization of Coupled Composite Laminates: Benchmark Configurations and Special Cases, 64

Stilling basins

Influence of Tailwater Depth and Pile Position on Scour Downstream of Block Ramps, 1212

Stochastic models

Deterioration Forecasting Model with Multistage Weibull Hazard Functions, 1192
Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975
Modeling and Simulation of Traffic Movements at Semiactuated Signalized Intersections, 1847
Modeling Conjunctive Use Operations and Farm Decisions with Two-Stage Stochastic Quadratic Programming, 1998
Optimal Water Distribution Network Design with Honey-Bee Mating Optimization, 273
Reliability-Based Design Using Two-Stage Stochastic Optimization with a Treatment of Model Prediction Errors, 603
Simulating Residential Water Demand with a Stochastic End-Use Model, 1960

Stochastic processes

Application of a Mass Balance-Based Stochastic Transport Model, 2113
Contemporaneous Time Series and Forecasting Methodologies for Predicting Short-Term Productivity, 418
Cross-Validation of Short-Term Productivity Forecasting Methodologies, 417
Detecting Unsafe Roadways with Spatial Statistics: Point Patterns and Geostatistical Models, 1836
Dual-Interval Fuzzy Stochastic Programming Method for Long-Term Planning of Municipal Solid Waste Management, 279

Extended Kalman Filtering to Improve the Accuracy of a Subsurface Contaminant Transport Model, 664
Feature Selection Using Stochastic Search: An Application to System Identification, 262
Finite-Element Analysis and Vibration Testing of a Two-Span Masonry Arch Bridge, 1499
Highway Network Retrofit under Seismic Hazard, 1182
In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study, 150
Investigation of Turbulence Effects on Torsional Divergence of Long-Span Bridges by Using Dynamic Finite-Element Method, 155
L_1-Norm Path Flow Estimator for Handling Traffic Count Inconsistencies: Formulation and Solution Algorithm, 1848
Modeling Blockage Failures in Sewer Systems to Support Maintenance Decision Making, 1559
Modeling Nonlinear Systems by Volterra Series, 537
Monte–Carlo Based Method for Predicting Extreme Value Statistics of Uncertain Structures, 605
Short-Term Prediction of Urban Traffic Variability: Stochastic Volatility Modeling Approach, 1853
Statistical Moments of Polynomial Dimensional Decomposition, 549
Stochastic Dilemma Hazard Model at High-Speed Signalized Intersections, 1835
Stochastic Response of an Inclined Shallow Cable with Linear Viscous Dampers under Stochastic Excitation, 599
Stochastic Simulation of Non-Gaussian 3D Conductivity Fields in a Fractured Medium with Multiple Statistical Populations: Case Study, 1112
Transient Hydrodynamic Dispersion in Rough Open Channels: Theoretical Analysis of Bed-Form Effects, 957

Stone columns

Effect of Sand Columns on the Undrained Load Response of Soft Clays, 898
Studies on the Behavior of Single and Group of Geosynthetic Encased Stone Columns, 786

Stones

Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542
Interactions of Granite and Asphalt Based on the Rheological Characteristics, 1435
Nondeformability of Ventilated and Mortar-Embedded Marble Facade Panels, 1496
Performance of Geosynthetic-Encased Stone Columns in Embankment Construction: Numerical Investigation, 887
Stability of Stones under Uniform Flow, 954

Storage

Accumulative Sliding Construction Method for Large-Span Latticed Shells, 428

Storage tanks

Design of Pumped Water Distribution Networks with Storage, 1971
Effect of Wall Flexibility on Dynamic Response of Concrete Rectangular Liquid Storage Tanks under Horizontal and Vertical Ground Motions, 1652
Evaluating Watershed Management within a River Basin Context Using an Integrated Indicator System, 1985
Optimal Distribution and Control of Storage Tank to Mitigate the Impact of New Developments on Receiving Water Quality, 648

Storm sewers

Remarks on Camp's Criterion for Self-Cleansing Storm Sewers, 1216
Trenchless Renewal of Culverts and Storm Sewers, 2291

Storm surges

Building Damage due to Riverine and Coastal Floods, 1992
Climate Links and Variability of Extreme Sea-Level Events at Key West, Pensacola, and Mayport, Florida, 2061
Infragravity Wave Motions and Runup over Shallow Fringing Reefs, 2056
Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045
Wind Storm and Storm Surge Mitigation, 2295

Storms

Deficiency Analysis of Coastal Buildings toward Storm Damage Reduction, 1508
Estuarine and Coastal Modeling, 2241

Stormwater management

Asset Management for Urban Wastewater Pipeline Networks, 1174
Characterizing Physicochemical Quality of Storm-Water Runoff from an Urban Area in Calgary, Alberta, 745
Design Criteria of Urban Drainage Infrastructures under Climate Change, 1979
Designing Storm-Water Controls to Promote Sustainable Ecosystems: Science and Application, 1106
Diffusion Wave Model for Simulating Storm-Water Runoff on Highway Pavement Surfaces at Superelevation Transition, 1020
Discharge Formulas for Subsurface Drainage of Retention Pond, 1223
Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628
Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393
Effect of Forced Aeration and Mechanical Turning on Leachate Quantity and Quality from Glass Cullet Stockpiles, 708
Effect of Rejuvenation Methods on the Infiltration Rates of Pervious Concrete Pavements, 1098
Effect of Storm-Water Wetlands and Wet Ponds on Runoff Temperature in Trout Sensitive Waters, 1273
Effective Curve Number and Hydrologic Design of Pervious Concrete Storm-Water Systems, 1102
Establishing Storm-Water BMP Evaluation Metrics Based upon Ambient Water Quality Associated with Benthic Macroinvertebrate Populations, 673
Evaluating Urban Pollutant Buildup/Wash-Off Models Using a Madison, Wisconsin Catchment, 630
Evaluating Watershed Management within a River Basin Context Using an Integrated Indicator System, 1985
Evaluation of Methods for Representing Urban Terrain in Storm-Water Modeling, 1055
Evaluation of Storm-Water Wetlands in Series in Piedmont North Carolina, 624

Explanation for Anomalous Readings during Monitoring of a Best Management Practice, 1258
Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746
Fines Accumulation and Distribution in a Storm-Water Rain Garden Nine Years Postconstruction, 1292
Frequency Methodology for Evaluating Urban and Highway Storm-Water Quality Control Infiltration BMPs, 1983
Generalized Method for Storm-Water Pumping Station Design, 1146
Guideline for Monitoring Stormwater Gross Solids, 2252
Hydraulic Deterioration Models for Storm-Water Drainage Pipes: Ordered Probit versus Probabilistic Neural Network, 275
Hydraulic Model for Sedimentation in Storm-Water Detention Basins, 672
Hydraulic Test of a Bioretention Media Carbon Amendment, 1109
Hydrologic and Water Quality Aspects of Using a Compost/Mulch Blend for Erosion Control, 1272
Hydrologic Performance Monitoring of an Underdrained Low-Impact Development Storm-Water Management System, 1237
Impact of Storm-Water Runoff on Clogging and Fecal Bacteria Reduction in Sand Columns, 772
Incentive Index Developed to Evaluate Storm-Water Low-Impact Designs, 761
Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096
Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016
Low Impact Development 2010, 2262
Markov and Neural Network Models for Prediction of Structural Deterioration of Storm-Water Pipe Assets, 1180
Modeling and Sizing Bioretention Using Flow Duration Control, 1097
Modeling Techniques of Best Management Practices: Rain Barrels and Rain Gardens Using EPA SWMM-5, 1099
Modeling Urban Storm-Water Quality Treatment: Model Development and Application to a Surface Sand Filter, 616
Modeling Water Table Mounding and Contaminant Transport beneath Storm-Water Infiltration Basins, 1152
New Approach to Evaluate Pollutant Removal by Storm-Water Treatment Devices, 653
New Insights into the Quality of Urban Storm Water in South Eastern Australia, 654
Observed and Modeled Performances of Prototype Green Roof Test Plots Subjected to Simulated Low- and High-Intensity Precipitations in a Laboratory Experiment, 1100
Parking Deck's First Flush, 1069
Performance of Nitrogen-Removing Bioretention Systems for Control of Agricultural Runoff, 733
Potential for Clay Clogging of Pervious Concrete under Extreme Conditions, 1063
Preservation of Watershed Regime for Low-Impact Development through Detention, 1056
Probabilistic Approach to Estimation of Urban Storm-Water TMDLs: Regulated Catchment, 1270
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095
Review of Bioretention System Research and Design: Past, Present, and Future, 710
Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623
Runoff Characteristics for Construction Site Erosion Control Practices, 1245
Runoff Volume Reduction by a Level Spreader–Vegetated Filter Strip System in Suburban Charlotte, N.C., 1105
Side-by-Side Comparison of Nitrogen Species Removal for Four Types of Permeable Pavement and Standard Asphalt in Eastern North Carolina, 1107
Simulation-Optimization Framework to Support Sustainable Watershed Development by Mimicking the Predevelopment Flow Regime, 1996
Statistical Evaluation of Factors Affecting Indicator Bacteria in Urban Storm-Water Runoff, 763
Thermal Reduction by an Underground Storm-Water Detention System, 671
An Urban Approach to LID, 2208
Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103
Variability of *Escherichia coli* Concentrations in an Urban Watershed in Texas, 762
Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171
Volumetric Filtration of Rainfall Runoff. I: Event-Based Separation of Particulate Matter, 759
Watershed Management 2010, 2293

Strain

Analysis of Soil Strength Degradation during Episodes of Cyclic Loading, Illustrated by the T-Bar Penetration Test, 23
Characterization of Rutting (Permanent Strain) Development of A-2-4 and A-4 Subgrade Soils under the HVS Loading, 1534
Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198
Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706
Effectiveness of Viscoelastic Models for Prediction of Tensile Axial Strains during Cyclic Loading of High-Density Polyethylene Pipe, 1570
Effects of Strain Localization on Seismic Active Earth Pressures, 873
Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111
Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449
Length Scales Interaction in Nonlocal Plastic Strain Localization of Bars of Varying Section, 561
Mesoscale Approach to Modeling Concrete Subjected to Thermomechanical Loading, 491
Numerical Simulation of Damage Localization in Polyester Mooring Ropes, 552
Postprocessing Method for Dynamic Modulus Tests of Hot-Mix Asphalt, 1415
Radial Basis Function Neural Network Models for Peak Stress and Strain in Plain Concrete under Triaxial Stress, 1447
Response of Spiral-Reinforced Lightweight Concrete to Short-Term Compression, 1491

Rotation- and Translation-Free Estimations of Symmetric, Rank-Two Tensors with a Case Study in LIDAR Surveying, 1768
Shear Performance of RC Bridge Girders Reinforced with Carbon FRP Stirrups, 98
Statistical Properties of Strain and Rotation Tensors in Geodetic Network, 1778
Torsional Strength of RC Beams Considering Tension Stiffening Effect, 1741

Strain distribution
Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227
Parametric Estimation for RC Flexural Members Based on Distributed Long-Gauge Fiber Optic Sensors, 1620

Strain gages
Exhumed Geogrid-Reinforced Retaining Wall, 902
Field Behavior of an Integral Abutment Bridge Supported on Drilled Shafts, 95

Strain hardening
Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657

Strain rates
Behavior of Concrete in Water Subjected to Dynamic Triaxial Compression, 496
Effects of Loading Rate and Duration on Axial Behavior of Concrete Confined by Fiber-Reinforced Polymer Sheets, 190
Study on Strain-Rate Sensitivity of Cementitious Composites, 566
Time Effects Relate to Crushing in Sand, 893

Strain softening
Constitutive Models for Tuff Masonry under Uniaxial Compression, 1467
Mesh Dependence and Nonlocal Regularization of One-Dimensional Strain Softening Plasticity, 594
Nonlocal Multilaminate Model for Strain Softening Analysis, 15
Stability Analysis of Strain-Softening Slope Reinforced with Stabilizing Piles, 927

Stratification
Effects of Bubble Size and Diffusing Area on Destratification Efficiency in Bubble Plumes of Two-Layer Stratification, 951

Streamflow
Analysis and Synthesis of Transmission Loss Hydrographs, 1271
Application of Partial Least-Squares Regression in Seasonal Streamflow Forecasting, 1116
Climate Change Impact Assessment Using K-Nearest Neighbor Weather Generator: Case Study of the Nakdong River Basin in Korea, 1133
Comparing Sigmoid Transfer Functions for Neural Network Multistep Ahead Streamflow Forecasting, 1085
Distribution of Stream Depletion, 959
Flash Flooding in the Philadelphia Metropolitan Region, 1058
Formulation of the Entropy Parameter Based on Hydraulic and Geometric Characteristics of River Cross Sections, 1141
Long-Lead Water Supply Forecast Using Large-Scale Climate Predictors and Independent Component Analysis, 1131
New Approach to Identify Trend Pattern of Streamflows, 1081
Nonparametric Simulation of Single-Site Seasonal Streamflows, 1086
Upper Green River Basin (United States) Streamflow Reconstructions, 1113

Streets
Green Streets and Highways 2010, 2250
Roadway Lighting Shows Safety Benefits at Rural Intersections, 1891
Structural Design of Interlocking Concrete Pavement for Municipal Streets and Roadways [ASCE/T&DI/ICPI 58-10], 2284

Strength
Behavior of Concrete in Water Subjected to Dynamic Triaxial Compression, 496
Design and Application of Risk Adjusted Cumulative Sum for Strength Monitoring of Ready Mixed Concrete, 376
Effects of Bulk Water Chemistry on Autogenous Healing of Concrete, 1398
Lateral Out-of-Plane Strengthening of Masonry Walls with Composite Materials, 214
Micromechanical Explanation of Elasticity and Strength of Gypsum: From Elongated Anisotropic Crystals to Isotropic Porous Polycrystals, 483
Nonlinear Unified Strength Criterion for Concrete under Three-Dimensional Stress States, 464
Pullout Strength Models for FRP Anchors in Uncracked Concrete, 217
Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718
Simplified Model for Compressive Behavior of Concrete Columns Strengthened by Steel Angles and Strips, 482
Strength and Stiffness of Circular Concrete-Filled Tubes, 1757
Truss Modeling of Concrete Columns in Compression, 558

Stress
Analysis of Reinforced Concrete Shells with Transverse Shear Forces, 1690
Critical Assessment of Pavement Distress Segmentation Methods, 1789
Development, Calibration, and Verification of a New Mechanistic-Empirical Reflective Cracking Model for HMA Overlay Thickness Design and Analysis, 1827
Dilatancy and Shear Strength of Sand at Low Confining Pressures, 825
Drained Deformation Behavior of Anisotropic Sands during Cyclic Rotation of Principal Stress Axes, 920
Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822
Exhumed Geogrid-Reinforced Retaining Wall, 902
Implementation and Application of a New Elastoplastic Model Based on a Multiaxial Criterion to Assess the Stress State near Underground Openings, 13
Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129
Is Matric Suction a Stress Variable?, 3
Long-Term Field Performance of Cold In-Place Recycled Roads in Iowa, 1522

Mesh-Independent Fracture Modeling for Overlay Pavement System under Heavy Aircraft Gear Loadings, 1828

Moments-Based Reduced Spectral Wave Modeling of Frequency-and-Directional Spreading Effects on Wave-Induced Longshore Currents, 2047

New Structural Model for Multicomponent Pile Cross Sections under Axial Load, 859

Nonlinear Unified Strength Criterion for Concrete under Three-Dimensional Stress States, 464

Optimal Layout of Gill Cells for Very Large Floating Structures, 1697

Postprocessing Method for Dynamic Modulus Tests of Hot-Mix Asphalt, 1415

Radial Basis Function Neural Network Models for Peak Stress and Strain in Plain Concrete under Triaxial Stress, 1447

Rank Correlation Method for Evaluating Manual Pavement Distress Data Variability, 1169

Relationship between Probability of Breakage to Maximum Principal Stresses in Window Glass, 78

Simplified Nonlinear Temperature Curling Analysis for Jointed Concrete Pavements, 1858

Stresses in External and Internal Unbonded Tendons: Unified Methodology and Design Equations, 1712

Study of Stress Intensity Factor of a Cracked Steel Plate with a Single-Side CFRP Composite Patching, 254

Torsional Strength of RC Beams Considering Tension Stiffening Effect, 1741

Using Fuzzy Logic and Expert System Approaches in Evaluating Flexible Pavement Distress: Case Study, 1805

Stress concentration

Effect of Geometric Discontinuities on Strains in FRP-Wrapped Columns, 189

Externally Reinforced Welded I-Beam-to-Box-Column Seismic Connection, 461

I-35W Bridge Collapse, 151

Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759

Stress distribution

Effect of Geometric Discontinuities on Strains in FRP-Wrapped Columns, 189

Influence of Nonlinearity on the Stress Distribution in the Soil—Application to Road Engineering Problems, 1797

Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227

Numerical Modeling of Geofoam Embankments, 802

Structural Behavior of a Pile-Supported Embankment, 777

Stress history

Monitoring and Modeling Grout Efficiency of Lifting Structure in Soft Clay, 35

Stress strain relations

Analytical Model for Circular Normal- and High-Strength Concrete Columns Confined with FRP, 233

Behavior and Modeling of Confined High-Strength Concrete, 201

Behavior of Large-Scale Rectangular Columns Confined with FRP Composites, 182

Behavior of Steel Fiber-Reinforced High-Strength Concrete Columns under Uniaxial Compression, 1728

Constitutive Models for Tuff Masonry under Uniaxial Compression, 1467

Empirical Stress-Strain Model for Unconfined High-Strength Concrete under Uniaxial Compression, 1476

Experimental Study and Theoretical Models on Compressive Properties of Ultrahigh Toughness Cementitious Composites, 1463

Full-Scale Field Testing for Verification of Mechanical Properties of Polyurethane Foams for Use as Backfill in PCC Repairs, 1367

Measuring and Modeling Proportion-Dependent Stress-Strain Behavior of EPS-Sand Mixture, 34

Mesomechanical Model for Numerical Study of Two-Dimensional Triaxially Braided Composite, 595

Micromechanical Modeling for Inherent Anisotropy in Granular Materials, 539

Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-10 (Book), 2263

Sensitivity of Model Parameter on Dynamic Behavior Simulation of HPC, 1485

Shear Strength of Municipal Solid Waste, 10

Stress-Strain Behavior of Concrete in Hybrid FRP-Concrete-Steel Double-Skin Tubular Columns, 1646

Stress-Strain Responses of Block Samples of Compressible Chicago Glacial Clays, 790

Study on Strain-Rate Sensitivity of Cementitious Composites, 566

Structural analysis

Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627

Explosion Phenomena and Effects of Explosions on Structures. I: Phenomena and Effects, 2143

Explosion Phenomena and Effects of Explosions on Structures. II: Methods of Analysis (Explosion Effects), 2144

Explosion Phenomena and Effects of Explosions on Structures. III: Methods of Analysis (Explosion Damage to Structures) and Example Cases, 2145

Force Finding of Tensegrity Systems Using Simulated Annealing Algorithm, 1709

Multimodel Structural Performance Monitoring, 1736

Nonlinear Static Analysis of Structures with Rocking Columns, 1661

Optimizing Structures Subject to Multiple Deflection Constraints and Load Cases Using the Principle of Virtual Work, 1748

Stability Analysis of Bay Bridge Saddle Configuration, 1764

Structural Analyses and Assessment of Historical Kamanlı Mosque in Izmir, Turkey, 1531

Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Structural Reliability of Prestressed UHPC Flexure Models for Bridge Girders, 100

Structural behavior

Identification and Monitoring of Modal Parameters in Aircraft Structures Using the Natural Excitation Technique (NExT) Combined with the Eigensystem Realization Algorithm (ERA), 49

Nonlinear Identification of Lumped-Mass Buildings Using Empirical Mode Decomposition and Incomplete Measurement, 486

Performance of Bridge Materials by Structural Deficiency Analysis, 1530

Structural Behavior of a Pile-Supported Embankment, 777

Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689

Structural control

Acceleration Tracking Performance of the UCSD-NEES Shake Table, 1656

Improved Decentralized Method for Control of Building Structures under Seismic Excitation, 524

Modular High-Force Seismic Magneto-Rheological Fluid Damper, 1619

Multiscale Wavelet-LQR Controller for Linear Time Varying Systems, 573

Performance Test of Energy Dissipation Bearing and Its Application in Seismic Control of a Long-Span Bridge, 153

Structural design

Air-Blast Effects on Structural Shapes of Finite Width, 1621

Aligned with Nature, 2220

Analysis of Reinforced Concrete Shells with Transverse Shear Forces, 1690

The Art of Parking, 2211

Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627

Benchmarking Current Conceptual High-Rise Design Processes, 87

Building Robustness Research during World War II, 1549

The Burj Khalifa Triumphs: Engineering an Idea: The Realization Of the Burj Khalifa, 2169

Capitol Connections, 2189

Design of Blast-Resistant Buildings in Petrochemical Facilities, 2234

Design Structure Matrix Implementation on a Seismic Retrofit, 1331

Designing Suspended Scaffold Structural Support Elements and Lifeline Anchorages in Conformance with Federal OSHA Requirements, 2148

A Glittering Center, 2198

Greener Roads Ahead, 2210

Lateral Seismic Performance of Multipanel Precast Hollowcore Walls, 1686

Local Buckling of Fire-Exposed Aluminum Members: New Design Model, 1612

Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-10 (Book), 2263

A New Angle, 2194

Prediction of Net-Tension Strength for Multirow Bolted Connections of Pultruded Material Using the Hart-Smith Semiempirical Modeling Approach, 186

Simplified Direct Displacement Design of Six-Story Woodframe Building and Pretest Seismic Performance Assessment, 1688

Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854

Strength and Stiffness of Circular Concrete-Filled Tubes, 1757

Structural Applications of Steel Cables for Buildings, 2283

Structural Design of Interlocking Concrete Pavement for Municipal Streets and Roadways [ASCE/T&DI/ICPI 58-10], 2284

Structural Design of the DRL-10 Space Pavilion, 88

Super Span (SuperSpan), 2160

Super Span (SuperSpan)

Tall Building Response Parameters: Sensitivity Study Based on Orthogonal Factorial Experiment Design Technique, 1622

Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103

Ultimate Wind Load Design Gust Wind Speeds in the United States for Use in ASCE-7, 1668

Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681

Wind Loads, 2294

Structural dynamics

Acceleration Tracking Performance of the UCSD-NEES Shake Table, 1656

Aerodynamic Damping in the Along-Wind Response of Tall Buildings, 1617

Complex Frequencies in Elastodynamics, with Application to the Damping-Solvent Extraction Method, 522

Damped Properties and Noether Symmetries of Damped Free Vibration, 2134

Dynamic Analysis of a Composite Cable-Stayed Bridge: Escaleritas Viaduct, 156

Handling the Temperature Effect in Vibration Monitoring: Two Subspace-Based Analytical Approaches, 495

Multivariate Statistical Approach to Structural Damage Detection, 460

Stability Analysis of Direct Integration Algorithms Applied to MDOF Nonlinear Structural Dynamics, 508

Structural engineering

2010 Structures Congress, 2225

Behavior of Bidirectional Spring Unit in Isolated Floor Systems, 1700

Design Structure Matrix Implementation on a Seismic Retrofit, 1331

Disproportionate Collapse: Terminology and Procedures, 1548

Earth and Space 2010, 2236

Engineering Perspectives on Reducing Hurricane Damage to Housing in CARICOM Caribbean Islands, 2092

Indo-U.S. Forensic Practices, 2260

Lessons Learned from a Design Competition for Structural Engineering Students: The Case of a Pedestrian Walkway at the Université de Sherbrooke, 1587

Sustainability Guidelines for the Structural Engineer, 2285

Structural failures

Forensic Engineering 2009, 2245

Learning from Construction Failures due to the 2009 L'Aquila, Italy, Earthquake, 1550

Markov and Neural Network Models for Prediction of Structural Deterioration of Storm-Water Pipe Assets, 1180

Problems with Hu-Duan Boundary Effect Model and Its Comparison to Size-Shape Effect Law for Quasi-Brittle Fracture, 463

Reducing Brittle and Fatigue Failures in Steel Structures, 2274

Structural System Parameter Selection Based on Collapse Potential of Buildings in Earthquakes, 1699

Time-Dependent Risk Assessment of Combined Overtopping and Structural Failure for Reinforced Concrete Coastal Structures, 2038

Structural members

Cyclic Behavior of Diagrid Nodes with H-Section Braces, 1717

Tensile Membrane Structure, 2287

Structural models

Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627

Dynamic Identification of a Concrete Bridge with Orthotropic Plate-Type Deck, 1666

Hierarchical Structuring of PPP Risks Using Interpretative Structural Modeling, 329

Practical Subgrade Model for Improved Soil-Structure Interaction Analysis: Software Implementation, 2157

Workload Distribution Framework for the Parallel Solution of Large Structural Models on Heterogeneous PC Clusters, 276

Structural reliability

Aerostatic Reliability Analysis of Long-Span Bridges, 119

Bayesian Network Enhanced with Structural Reliability Methods: Methodology, 583

Bayesian Network Enhanced with Structural Reliability Methods: Application, 584

Capacity Reduction and Fire Load Factors for Design of Steel Members Exposed to Fire, 1758

Characterization of Wireless Smart Sensor Performance, 601

Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578

Inclusion of Crawl Tests and Long-Term Health Monitoring in Bridge Serviceability Analysis, 124

In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study, 150

LRFD Factors for Pultruded Wide-Flange Columns, 1663

Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510

New Multidimensional Visualization Technique for Limit-State Surfaces in Nonlinear Finite-Element Reliability Analysis, 597

Parametric Estimation for RC Flexural Members Based on Distributed Long-Gauge Fiber Optic Sensors, 1620

Prediction of Extreme Response Statistics of Narrow-Band Random Vibrations, 488

Quantitative Structural Health Monitoring by Ultrasonic Guided Waves, 551

Reliability Analysis of Earth Dams, 872

Reliability-Based Evaluation of Flexural Members Strengthened with Externally Bonded Fiber-Reinforced Polymer Composites, 1721

Reliability-Based Modeling of Bridge Deterioration Hazards, 158

Safety Assessment of a Steel Frame Using LRFD and SBRA Methods, 2136

Sensor Network for Structural Health Monitoring of a Highway Bridge, 263

Structural Reliability Estimation with Vibration-Based Identified Parameters, 469

Structural Reliability of Prestressed UHPC Flexure Models for Bridge Girders, 100

Structural response

Blast Limits for Transmission Structures. II: Structural Response and Blast Limit Development, 1501

Bridge Model Updating Using Response Surface Method and Genetic Algorithm, 147

Decomposition and Effects of Pulse Components in Near-Field Ground Motions, 1675

Effect of Fabric Webs on the Static Response of Spindle-Shaped Tensairity Columns, 1649

Response of an Elastic Structure Subject to Air Shock Considering Fluid-Structure Interaction, 59

Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572

Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854

Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103

Structural safety

Design of Blast-Resistant Buildings in Petrochemical Facilities, 2234

Safety of Structures in Strong Winds and Earthquakes: Multihazard Considerations, 1640

Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

Structural stability

Aerostatic Reliability Analysis of Long-Span Bridges, 119

Influence of Bracings on the Stability of Columns, 2154

Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852

Slenderness Effects on Circular CFRP Confined Reinforced Concrete Columns, 204

Stability of Shallow Tunnel Using Rigid Blocks and Finite-Element Upper Bound Solutions, 38

Static Stability Formulas of a Weakened Timoshenko Column: Effects of Shear Deformations, 608

Study of Buckling in Steel Silos under Eccentric Discharge Flows of Stored Solids, 534

Unified Flexural Resistance Equations for Stability Design of Steel I-Section Members: Overview, 8

Structural steel

Structural Steel ASTM A709—Behavior at Uniaxial Tests Conducted at Lowered and Elevated Temperatures, Short-Time Creep Response, and Fracture Toughness Calculation, 567

Structural systems

Multidisciplinary Assessment of Critical Facility Response to Natural Disasters, 2264

Novel Approach for Multicriteria Optimization of Life-Cycle Preventive and Essential Maintenance of Deteriorating Structures, 1707

Structure reinforcement

Assessing the Environmental Impacts of a Lean Supply System: Case Study of High-Rise Condominium Construction in Korea, 92

Terrestrial Laser Scanning-Based Structural Damage Assessment, 285

Structures
Adaptive Harmony Search Method for Structural Optimization, 1650
Automatic Extraction of Apparent Semantic Structure from Text Contents of a Structural Calculation Document, 290
High Displacement Glass Seismic Systems, 2146

Struts
Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627

Students
Cultivating Research and Information Skills in Civil Engineering Undergraduate Students, 1584
Leading, Learning, and Living the Shackleton Way: Education and Practice, 2066
Lessons Learned from a Design Competition for Structural Engineering Students: The Case of a Pedestrian Walkway at the Université de Sherbrooke, 1587
Program Assessment and Evaluation Using Student Grades Obtained on Outcome-Related Course Learning Objectives, 1602

Studs
Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625
Relaxing the Stud Spacing Limit for Full-Depth Precast Concrete Deck Panels Supported on Steel Girders (Phase I), 140
Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714

Subgrades
Characterization of Rutting (Permanent Strain) Development of A-2-4 and A-4 Subgrade Soils under the HVS Loading, 1534
Estimating Subgrade Reaction Modulus for Transversely Isotropic Rock Medium, 880
Estimation of Resilient Modulus of Subgrade Soils for Design of Pavement Structures, 1422
Evaluation of Subgrade Strength and Pavement Designs for Reliability, 1829
Experimental Study on the Stability of Railroad Silt Subgrade with Increasing Train Speed, 855
Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties, 12
Practical Subgrade Model for Improved Soil-Structure Interaction Analysis: Software Implementation, 2157

Submerged flow
Characteristics of Monami Wave in Submerged Vegetated Flow, 1073

Submerging
Case Study: Effect of Submerged Aquatic Plants on Turbulence Structure in a Lowland River, 988
Case Study: Movable Bed Model Scaling for Bed Load Sediment Exclusion at Intake Structure on Rio Grande, 968
Enhancing Utility of Submerged Vanes with Collar, 1008
Flow over Gabion Weirs, 1265
Linear Instability Theory for Frequency Assessment of Coherent Vortices in Submerged and Aside Rigid Canopies, 1157
p-Wave Reflection Imaging of Submerged Soil Models Using Ultrasound, 906

Substrates
Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812
Effects of Primary Substrate Concentration on NDMA Transport during Simulated Aquifer Recharge, 652

Substructures
Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116
Large-Scale Experimental Study of Precast Segmental Unbonded Posttensioned Concrete Bridge Columns for Seismic Regions, 1632
Linearly Implicit Time Integration Methods for Real-Time Dynamic Substructure Testing, 596
Tracking Error-Based Servohydraulic Actuator Adaptive Compensation for Real-Time Hybrid Simulation, 1651
Workload Distribution Framework for the Parallel Solution of Large Structural Models on Heterogeneous PC Clusters, 276

Subsurface drainage
Class A Prediction of the Behavior of Soft Estuarine Soil Foundation Stabilized by Short Vertical Drains beneath a Rail Track, 841
Discharge Formulas for Subsurface Drainage of Retention Pond, 1223
Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221
Optimal Spacing in an Array of Fully Penetrating Ditches for Subsurface Drainage, 1206

Subsurface environment
Is Construction Blasting Still Abnormally Dangerous?, 1311
Nondestructive Testing of GFRP Bridge Decks Using Ground Penetrating Radar and Infrared Thermography, 131

Subsurface investigations
Site Characterization Model Using Artificial Neural Network and Kriging, 30

Suburbs
Intrametropolitan Determinants of Foreign Investment Firms in Istanbul, 1943
Runoff Volume Reduction by a Level Spreader–Vegetated Filter Strip System in Suburban Charlotte, N.C., 1105

Suction
Behavior of a Compacted Completely Decomposed Granite Soil from Suction Controlled Direct Shear Tests, 791
Influence of Osmotic Suction on the Soil-Water Characteristic Curves of Compacted Expansive Clay, 938
Is Matric Suction a Stress Variable?, 3
State Boundary Surfaces for an Aged Compacted Clay, 897

Sulfates
Addressing Sulfate-Induced Heave in Lime Treated Soils, 784
Calibration of Reactive Transport Models for Remediation of Mine Drainage in Solid-Substrate Biocolumns, 714
Contaminant Leaching from Stabilized/Solidified Acid Tars, 764
Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691

Filling of a Flooded Gypsum Mine with a Flowable Soil-Cement Mix, 1411

Forensic Investigations to Evaluate Sulfate-Induced Heave Attack on a Tunnel Shotcrete Liner, 1446

Improved Passive Treatment of Acid Mine Drainage in Mushroom Compost Amended with Crab-Shell Chitin, 683

Simulating the Effect of Sulfate Addition on Methylmercury Output from a Wetland, 651

Strength Deterioration of Plain and Metakaolin Concretes in Aggressive Sulfate Environments, 1385

Sulfides

Ferrous Salt Demand for Sulfide Control in Rising Main Sewers: Tests on a Laboratory-Scale Sewer System, 742

Sulfur

Bacterial Kinetics of Sulfur Oxidizing Bacteria and Their Biodeterioration Rates of Concrete Sewer Pipe Samples, 695

Distribution of the Microbial Community Structure in Sulfur-Based Autotrophic Denitrification Columns, 666

Performance of Nitrogen-Removing Bioretention Systems for Control of Agricultural Runoff, 733

Supply chain management

Integrated Project Delivery Case Study: Guidelines for Drafting Partnering Contract, 1316

Support structures

Capitol Connections, 2189

Certifying That Existing Suspended Scaffold Structural Support Elements and Lifeline Anchorages Comply with Federal OSHA Requirements, 2149

Designing Suspended Scaffold Structural Support Elements and Lifeline Anchorages in Conformance with Federal OSHA Requirements, 2148

Interplanar and Intraplanar Differential Settlement Analyses of Boiler Supporting Structure: Comparative Study, 2138

Surcharge

Dimensionless Method to Characterize the Mixing Effects of Surcharged Manholes, 975

Surf zones

Model of Nearshore Waves and Wave-Induced Currents around a Detached Breakwater, 2044

Spatiotemporal Characteristics of Near-Bed Pressure Gradients on a Barred Beach, 2059

Wave-Breaking Model for Boussinesq-Type Equations Including Roller Effects in the Mass Conservation Equation, 2031

Surface drainage

Effect of Historic Land Cover Change on Runoff Curve Number Estimation in Iowa, 1124

Generalized Method for Storm-Water Pumping Station Design, 1146

Surface roughness

Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194

Road Roughness and Whole Body Vibration: Evaluation Tools and Comfort Limits, 1876

Roughness Model Accounting for Heterogeneity Based on In-Service Pavement Performance Data, 1812

Surface water

Densimetric Monitoring Technique for Suspended-Sediment Concentrations, 949

Evaluating Urban Pollutant Buildup/Wash-Off Models Using a Madison, Wisconsin Catchment, 630

Evaluation of Surface Water Runoff from Fly Ash–Stabilized and Nonstabilized Soil Surfaces, 716

Predictive Modeling of Transient Storage and Nutrient Uptake: Implications for Stream Restoration, 1049

Probabilistic Approach to Estimation of Urban Storm-Water TMDLs: Regulated Catchment, 1270

River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289

Surface waves

Celerity and Amplification of Supercritical Surface Waves, 1009

Effect of Concrete Compositions in Energy Transmission of Surface Waves for Nondestructive Crack Depth Evaluation, 1425

Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039

Surface-active agents

Laboratory-Scale Flotation Process for Treatment of Soils Contaminated with Both PAH and Lead, 728

Surveys

Deformation Detection in the GPS Real-Time Series by the Multiple Kalman Filters Model, 1785

Detection of Terrain Morphologic Features Using GPS, TLS, and Land Surveys: "Tana della Volpe" Blind Valley Case Study, 1782

Evaluation of the Credibility of Reflectorless Distance Measurement, 1786

Extended Receiver Autonomous Integrity Monitoring (eRAIM) for GNSS/INS Integration, 1767

Increasing the Efficacy of the Conventional Deformation Analysis Methods: Alternative Strategy, 1773

Precise Control Survey for Erecting the Steel Pylons of the Third Nanjing Yangtze River Bridge, China: Case Study, 1769

Propagation of an Unmodeled Additive Constant in Range Sensor Observations, 1779

Public versus Private Perceptions on Hiring an External Program Manager, 336

Research Validation: Challenges and Opportunities in the Construction Domain, 327

Rigorous Estimation of Local Accuracies, 1780

Road Roughness and Whole Body Vibration: Evaluation Tools and Comfort Limits, 1876

Robust Multivariate Outlier Detection Methods for Environmental Data, 755

Rotation- and Translation-Free Estimations of Symmetric, Rank-Two Tensors with a Case Study in LIDAR Surveying, 1768

Two Methods to Estimate the Spot Size of Terrestrial Laser Scanners, 1781

Understanding Construction Industry Experience and Attitudes toward Integrated Project Delivery, 396

Suspended loads

Effects of Bed Load and Suspended Load on Separation of Sands and Fines in Mixed Sediment, 2058

Suspended sediment

Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987

Densimetric Monitoring Technique for Suspended-Sediment Concentrations, 949

Effect of Adaptive Cluster Sampling Design on Accuracy of Sediment Rating Curve Estimation, 1071

Monitoring Suspended Sediment Dynamics Using MBES, 945

Sustainable development

Accounting for Greenhouse Gas Emissions in Multiobjective Genetic Algorithm Optimization of Water Distribution Systems, 1974

Addressing Sustainability in Benchmarking Framework for Indian Urban Water Utilities, 1171

Arsenic and Fluoride Removal Using Simple Materials, 655

Building Information Modeling in Architecture, Engineering, and Construction: Emerging Research Directions and Trends, 1595

Characterization of Splitting Behavior of Bamboo Culms, 1479

Cost-Effectiveness of Green Roofs, 91

Counterfactual Analysis of Sustainable Project Delivery Processes, 373

Design Robustness of Local Water-Recycling Schemes, 2012

Designing Storm-Water Controls to Promote Sustainable Ecosystems: Science and Application, 1106

Developing and Teaching a Course in "Applied Sustainability and Public Health in Civil Engineering Design" at Queen's University, Kingston, Canada, 1601

Ecological Corridor in the Urban Area: Case Study in Kaohsiung City, Taiwan, 2103

Education for Sustainable Development and Civil Engineering for Children: Interactive Model Case Study, 1598

Effect of Rejuvenation Methods on the Infiltration Rates of Pervious Concrete Pavements, 1098

Effects of Urbanization on Groundwater, 2239

Engineered Bamboo I-Joists, 1765

Estimation of Evapotranspiration from Bioretention Areas Using Weighing Lysimeters, 1108

Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills, 1064

Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills

Field Procedures for Real-World Measurements of Emissions from Diesel Construction Vehicles, 1186

Green Streets and Highways 2010, 2250

Greener Roads Ahead, 2210

High-Performance Green Building Design Process Modeling and Integrated Use of Visualization Tools, 80

Hydrologic Performance Monitoring of an Underdrained Low-Impact Development Storm-Water Management System, 1237

ICLEM 2010, 2258

Impact of the Leadership in Energy and Environmental Design Accredited Professional Credential on Design Professionals, 1594

Impacts of Construction Activity on Bioretention Performance, 1094

Incentive Index Developed to Evaluate Storm-Water Low-Impact Designs, 761

Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096

Investigation of the Thermal Conductivity of Compacted Silts and Its Correlation to the Elastic Modulus, 1386

LEED Implementation Guide for Construction Practitioners, 85

Low Impact Development 2010, 2262

Model of Integrating Humanitarian Development into Engineering Education, 1590

Modeling and Sizing Bioretention Using Flow Duration Control, 1097

Observed and Modeled Performances of Prototype Green Roof Test Plots Subjected to Simulated Low- and High-Intensity Precipitations in a Laboratory Experiment, 1100

Piloting Evaluation Metrics for Sustainable High-Performance Building Project Delivery, 402

Place Identity and PlaceMaker: Planning the Urban Sustainability, 1932

Positive Psychological Capital as a Source of Sustainable Competitive Advantage for Organizations, 348

Preservation of Watershed Regime for Low-Impact Development through Detention, 1056

Project Management and Green Buildings: Lessons from the Rating Systems, 1588

Promoting Sustainability through Transportation Infrastructure? Innovation and Inertia in the Kansas City Metropolitan Area, 1950

Rating Sustainability: Transportation Investments in Urban Corridors as a Case Study, 1937

Recycled Red-Clay Ceramic Construction and Demolition Waste for Mortars Production, 1366

Review of Bioretention System Research and Design: Past, Present, and Future, 710

Runoff Volume Reduction by a Level Spreader–Vegetated Filter Strip System in Suburban Charlotte, N.C., 1105

Simulation-Optimization Framework to Support Sustainable Watershed Development by Mimicking the Predevelopment Flow Regime, 1996

Single-Objective versus Multiobjective Optimization of Water Distribution Systems Accounting for Greenhouse Gas Emissions by Carbon Pricing, 2015

Special Report: The Infrastructure Roundtables: Concluding Thoughts— Promote Sustainability And Resilience, 2181

Special Report: The Infrastructure Roundtables: Promote Sustainability and Resilience, 2175

Sustainability Guidelines for the Structural Engineer, 2285

Sustainable Electric Power System: Is It Possible? Case Study: Croatia, 458

Sustainable Wastewater Management in Developing Countries, 2286

Traffic and Transportation Studies 2010, 2289

Transit-Oriented Land Planning Model Considering Sustainability of Mass Rail Transit, 1944

Turkish Land Readjustment: Good Practice in Urban Development, 1958

Urban Land-Use Zoning Based on Ecological Evaluation for Large Conurbations in Less Developed Regions: Case Study in Foshan, China, 1929

Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103

Using Recycled Concrete Aggregates in New Zealand Ready-Mix Concrete Production, 1390

World Environmental and Water Resources Congress 2010, 2296

Swelling, material

Improvement of Problematic Soils by Lime Slurry Pressure Injection: Case Study, 915

Switzerland

A New Angle, 2194

Symmetry

Damped Properties and Noether Symmetries of Damped Free Vibration, 2134

System analysis

Assessment of Policies toward an Environmentally Friendly Urban Transport System: Case Study of Delhi, India, 1926

System reliability

Comparative Assessment of Civil Infrastructure Network Performance under Probabilistic and Scenario Earthquakes, 1162

Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477

Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852

Probabilistic Analysis of Transient Design for Water Supply Systems, 2028

Reliability-Based Design Using Two-Stage Stochastic Optimization with a Treatment of Model Prediction Errors, 603

Using GPS Data to Gain Insight into Public Transport Travel Time Variability, 1855

Tailings

Evaporation, Unsaturated Flow, and Salt Accumulation in Multilayer Deposits of "Paste" Gold Tailings, 939

Tailwater

Influence of Tailwater Depth and Pile Position on Scour Downstream of Block Ramps, 1212

Taiwan

Below-Average Bidding Method, 408

Causes of Delay in the Planning and Design Phases for Construction Projects, 84

Combined Cycle Power Augmentation by Overspray Inlet Fogging, 448

Ecological Corridor in the Urban Area: Case Study in Kaohsiung City, Taiwan, 2103

Effect of Diffuser Design on Thermal Comfort and Ventilation Efficiency, 2121

First Public-Private-Partnership Application in Taiwan's Wastewater Treatment Sector: Case Study of the Nanzih BOT Wastewater Treatment Project, 406

Integrated Water Resource Management for Kaoping River Basin, 2111

Mediation for Public Construction Contracts under the GPA in Taiwan, 1305

Method of Up-Slope Mitigation Priority for Alishan Mountain Road in Taiwan, 1533

Practical Summer Training in Civil and Construction Engineering for Cultivation of Professional Ability, 1605

Water Quality Modeling of a Hypoxic Stream, 2107

Taxation

Legal Issues of Integrated Network for Construction and Real Estate Sector, 1313

Taxis

Modeling Generalized Cost of Travel and Its Application for Improvement of Taxies in Kolkata, 1921

TCE

Long-Term Capacity of Plant Mulch to Remediate Trichloroethylene in Groundwater, 727

Treatment of TCE-Contaminated Groundwater Using Fenton-Like Oxidation Activated with Basic Oxygen Furnace Slag, 642

Teaching methods

Education for Sustainable Development and Civil Engineering for Children: Interactive Model Case Study, 1598

On the Job versus Graduate School Training of Forensic Engineers—An Instructor and Professional Engineer's View, 1503

Teamwork

Implementing Observational Research Methods to Study Team Performance in Construction Management, 322

Personal Construct-Based Factors Affecting Interpersonal Trust in a Project Design Team, 337

Technology

Construction Research Congress 2010, 2231

Differences in Off-Road Glances: Effects on Young Drivers' Performance, 1831

Revisiting the Gathering Storm, 2222

Understanding and Managing Three-Dimensional/Four-Dimensional Model Implementations at the Project Team Level, 389

Temperature distribution

Experimental Study on Moisture Migration in Unsaturated Loess under Effect of Temperature, 172

Temperature effects

Air Temperature Distribution and the Influence of Sky View Factor in a Green Singapore Estate, 1946

Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865

Application of Partial Least-Squares Regression in Seasonal Streamflow Forecasting, 1116

Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509

Assessment of Thermal Damage in Hybrid Fiber-Reinforced Concrete, 1437

Behavior of GFRP Reinforcing Bars Subjected to Extreme Temperatures, 211

Behavior of RC Beams Retrofitted with CARDIFRC after Thermal Cycling, 1342

Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction, 1465

Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198

Combining Remotely Sensed Data and Ground-Based Radiometers to Estimate Crop Cover and Surface Temperatures at Daily Time Steps, 1225

Comparative Study of Rheological Behavior of Modified Binders for High-Temperature Areas, 1452

Compressive Strength of Self-Compacting Concrete during High-Temperature Exposure, 1455

Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423
Deterioration of Bond Integrity between Repair Material and Concrete due to Thermal and Mechanical Incompatibilities, 1354
Development and Validation of 3D Composite Structural Elements at Elevated Temperatures, 1634
Development of Fiber-Reinforced Cement-Based Composite Sheets for Structural Retrofit, 1405
Effect of Severe Environmental Exposures on CFRP Wrapped Concrete Columns, 184
Effect of Temperature on the Setting Behavior of Concrete, 1363
Evaluation of 10-Year Temperature Differences between Urban and Rural Areas of a Well-Planned, Unindustrialized, and Medium-Sized Turkish Town, Erzincan, 1955
Experimental Study on Selective Withdrawal in a Two-Layer Reservoir Using a Temperature-Control Curtain, 967
Factors Study in Low-Temperature Fracture Resistance of Asphalt Concrete, 1355
Full-Scale Field Testing for Verification of Mechanical Properties of Polyurethane Foams for Use as Backfill in PCC Repairs, 1367
Geometrically Nonlinear Analysis of Plane Frames Subjected to Temperature Changes, 1739
Handling the Temperature Effect in Vibration Monitoring: Two Subspace-Based Analytical Approaches, 495
High-Temperature Properties of Steel for Fire Resistance Modeling of Structures, 1388
Laboratory Study on Ultraviolet Radiation Aging of Bitumen, 1427
Linear Viscoelastic Modeling for Hot-Poured Crack Sealants at Low Temperature, 1454
Mesh-Independent Fracture Modeling for Overlay Pavement System under Heavy Aircraft Gear Loadings, 1828
Modeling the Temperature Dependence of Adsorption Equilibriums of VOC(s) onto Activated Carbons, 620
Morphology of Asphalt Mixture Rheological Master Curves, 1433
New Approach for Surface n Factors, 169
Nonlinear Analysis of Composite Beams with Partial Interaction in Steel Frame Structures at Elevated Temperature, 1703
Nonlinear Thermoelastic Buckling of Pin-Ended Shallow Arches under Temperature Gradient, 553
Numerical Examination of a Method for Reducing the Temperature of Municipal Solid Waste Landfill Liners, 703
Relationship between Molecular Compositions and Rheological Properties of Neat Asphalt Binder at Low and Intermediate Temperatures, 1490
Relative Comparison of the Local Recalibration of the Temperature-Based Evapotranspiration Equation for the Korea Peninsula, 1266
Research on High- and Low-Temperature Properties of Asphalt-Mineral Filler Mastic, 1434
Residual Mechanical Properties of High-Strength Concretes after Exposure to Elevated Temperatures, 1346
Secondary Compression of Municipal Solid Wastes and a Compression Model for Predicting Settlement of Municipal Solid Waste Landfills, 843
Simplified Nonlinear Temperature Curling Analysis for Jointed Concrete Pavements, 1858
Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704
Structural Steel ASTM A709—Behavior at Uniaxial Tests Conducted at Lowered and Elevated Temperatures, Short-Time Creep Response, and Fracture Toughness Calculation, 567
Study on Pb and PAHs Emission Levels of Heavy Metals- and PAHs-Contaminated Soil during Thermal Treatment Process, 621
Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212
Temperature Effects on Material Behavior of Aerospace Aluminum Alloys for Subsonic and Supersonic Aircraft, 53
Thermal and Mechanical Properties at High Temperature of a Very High-Strength Durable Concrete, 1402
Thermal Reduction by an Underground Storm-Water Detention System, 671
Thermoviscoelastic Analysis and Creep Testing of Ambient Temperature Cure Epoxies Used in Adhesive Anchor Applications, 1460
Time-Temperature Superposition for HMA with Growing Damage and Permanent Strain in Confined Tension and Compression, 1387

Temporary structures

Maximizing Temporary Housing Safety after Natural Disasters, 1177
Structural Design of the DRL-10 Space Pavilion, 88
Tensile Membrane Structure, 2287

Tendons

Behavior of Prestressed Steel Beams, 1719
Lateral Seismic Performance of Multipanel Precast Hollowcore Walls, 1686

Tennessee

Design and Evaluation of Experimental Bridges in Tennessee, 1498
Evaluation of Longitudinal Joint Construction Techniques for Asphalt Pavements in Tennessee, 1468
Obstacles and Disaster Risk Reduction: Survey of Memphis Organizations, 2089

Tensile loads

Mechanical Properties of Steel-FRP Composite Bar under Uniaxial and Cyclic Tensile Loads, 1462
Theoretical Studies of the XY-FP Seismic Isolation Bearing for Bridges, 154

Tensile members

Tensile Membrane Structure, 2287

Tensile strength

Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509
Characterization of the Tensile Viscoelastic Properties of an Undamaged Asphalt Mixture, 1808
Effect of Fastener-Deck Strength on the Wind-Uplift Performance of Mechanically Attached Roofing Assemblies, 2131
Engineering Properties of Lunar Soil Simulant JSC-1A, 46
Influence of Antistripping Additives on Moisture Susceptibility of Warm Mix Asphalt Mixtures, 1461

Linear Elastic Fracture Mechanics Pullout Analyses of Headed Anchors in Stressed Concrete, 533

Parameters Controlling Tensile and Compressive Strength of Artificially Cemented Sand, 849

Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451

Residual Mechanical Properties of High-Strength Concretes after Exposure to Elevated Temperatures, 1346

Use of High Fineness of Fly Ash to Improve Properties of Recycled Aggregate Concrete, 1404

Tensile stress

Tensile Stiffness and Deformation Model of Rubber Isolators in Tension and Tension-Shear States, 501

Tension

Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693

Time-Temperature Superposition for HMA with Growing Damage and Permanent Strain in Confined Tension and Compression, 1387

Terminal facilities

Measuring Transfer Efficiency of Urban Public Transportation Terminals by Data Envelopment Analysis, 1951

Terminology

Disproportionate Collapse: Terminology and Procedures, 1548

Terrain models

Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries, 1067

Evaluation of Methods for Representing Urban Terrain in Storm-Water Modeling, 1055

Flood Modeling in the Coastal Plains and Mountains: Analysis of Terrain Resolution, 2079

Terrorism

Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Test procedures

Characterization of Splitting Behavior of Bamboo Culms, 1479

Tests

Acceleration Tracking Performance of the UCSD-NEES Shake Table, 1656

Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625

Development and Testing of a Fluorescent Fiber Solar Concentrator for Remote Daylighting, 455

Effects of the Source on Wave Propagation in Pile Integrity Testing, 892

Experimental Behavior of FRP Strengthened Masonry Arches, 207

Experiments on the Buckling Behavior of Ring-Stiffened Pipelines under Hydrostatic Pressure, 505

Fire Design of Timber-Concrete Composite Slabs with Screwed Connections, 1629

Structural Steel ASTM A709—Behavior at Uniaxial Tests Conducted at Lowered and Elevated Temperatures, Short-Time Creep Response, and Fracture Toughness Calculation, 567

Thermal Scale Modeling by FEM and Test, 41

Texas

Application of a Distributed Hydrologic Model to the November 17, 2004, Flood of Bull Creek Watershed, Austin, Texas, 1120

Drilling Under DFW, 2193

Horizontal Curve Accident Modification Factor with Consideration of Driveway Density on Rural Four-Lane Highways in Texas, 1877

Innovation in Ingleside, 2195

Ironclad, 2204

Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222

Relationship between Texas Cone Penetrometer Tests and Axial Resistances of Drilled Shafts Socketed in Clay Shale and Limestone, 888

Super Span (SuperSpan), 2160

Super Span (SuperSpan)

Textiles

Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123

Static and Cyclic Out-of-Plane Response of Masonry Walls Strengthened Using Textile-Mortar System, 1475

Textile Dye Removal in Single-Phase and Two-Phase Anaerobic Biotreatment Systems, 2125

Thailand

Effects of Calcium Carbide Residue–Fly Ash Binder on Mechanical Properties of Concrete, 1474

Theories

Centrifuge Permeameter for Unsaturated Soils. I: Theoretical Basis and Experimental Developments, 878

Contextualist Research: Iterating between Methods While Following an Empirically Grounded Approach, 326

Critical Investigation into the Applicability of the Learning Curve Theory to Rebar Fixing Labor Productivity, 441

Design Structure Matrix Implementation on a Seismic Retrofit, 1331

Dynamic Instability of Functionally Graded Shells Using Higher-Order Theory, 515

Ethnographic Theory-Building Research in Construction, 320

Modified Thermal Theory for Gravity Currents on Sloping Boundaries, 1028

Theoretical Framework for Modeling Pedestrians' Crossing Behavior along a Trip, 1887

Theoretical p-y Curves for Laterally Loaded Single Piles in Undrained Clay Using Bezier Curves, 800

Theory-Based SCS-CN Method and Its Applications, 1159

Thermal analysis

Mesoscale Approach to Modeling Concrete Subjected to Thermomechanical Loading, 491

Thermoviscoelastic Analysis and Creep Testing of Ambient Temperature Cure Epoxies Used in Adhesive Anchor Applications, 1460

Thermal diffusion

Effect of Diffuser Design on Thermal Comfort and Ventilation Efficiency, 2121

Thermal factors

Behavior of Bridge Asphalt Plug Joints under Thermal and Traffic Loads, 118

Below-Ground Performance of Rigid Polystyrene Foam Insulation: Review of Effective Thermal Resistivity Values Used in ASCE Standard 32-01—Design and Construction of Frost-Protected Shallow Foundations, 170

Determining Thermal Conductivity of Paving Materials Using Cylindrical Sample Geometry, 1360

Effect of Storm-Water Wetlands and Wet Ponds on Runoff Temperature in Trout Sensitive Waters, 1273

Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657

Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130

Flutter Control of Smart Composite Structures in Hygrothermal Environment, 73

HSC with Expanded Perlite Aggregate at Wet and Dry Curing Conditions, 1486

Hygrothermoelastic Postbuckling Response of Laminated Composite Plates, 39

Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105

Investigation of the Use of Lightweight Aggregate Hot-Mixed Asphalt in Flexible Pavements in Frost Susceptible Areas, 1358

Laboratory Test and Numerical Simulation of Time-Dependent Thermomechanical Behavior of the Three-Gorges Dam, 1352

Microwave-Enhanced Thermal Desorption of Polyhalogenated Biphenyls from Contaminated Soil, 643

Modified Thermal Theory for Gravity Currents on Sloping Boundaries, 1028

Natural Vibrations of Open-Variable Thickness Circular Cylindrical Shells in High Temperature Field, 62

Nondeformability of Ventilated and Mortar-Embedded Marble Facade Panels, 1496

Numerical Study of an Integral Abutment Bridge Supported on Drilled Shafts, 96

Numerical/Experimental Correlation of a Plasma Wind Tunnel Test on a UHTC-Made Nose Cap of a Reentry Vehicle, 72

Permafrost Weakening as a Potential Impact of Climatic Warming, 168

Removal of Toluene Using UV-Irradiated and Nonthermal Plasma–Driven Photocatalyst System, 747

Reuse of Fruit Waste as Biopolymeric Flocculant and Optimizing Turbidity Reduction: Comparison Study with Industrial Flocculant, 752

Thermal and Mechanical Properties at High Temperature of a Very High-Strength Durable Concrete, 1402

Thermal Interaction between Permafrost and the Qinghai-Tibet Railway, 175

Thermal Scale Modeling by FEM and Test, 41

Thermal stress

Thermomechanical Behavior of Multifunctional GFRP Sandwich Structures with Encapsulated Photovoltaic Cells, 224

Thermodynamics

Micromechanics of the Effects of Mixing Moisture on Foamed Asphalt Mix Properties, 1453

Removal of Heavy Metal Ions by Waste Biomass of *Saccharomyces Cerevisiae*, 619

Thickness

Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550

Nonlinear Finite-Element-Based Investigation of the Effect of Bedding Thickness on Buried Concrete Pipe, 1873

Thin shell structures

Study of Buckling in Steel Silos under Eccentric Discharge Flows of Stored Solids, 534

Thin wall sections

Graphical Determination of the Shear Center in Thin-Walled Asymmetrical U Profiles, 2147

Three-dimensional analysis

Limit Analysis and Stability Charts for 3D Slope Failures, 831

Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176

Three-Dimensional Semianalytical Solutions of Groundwater Flow to a Well in Fractured Wedge-Shaped Aquifers, 1153

Three-Dimensional Structural Translation and Rotation Measurement Using Monocular Videogrammetry, 540

Three-dimensional flow

Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002

Experimental Study of Three-Dimensional Flow Field around a Complex Bridge Pier, 473

Influence of Vertical Resolution and Nonequilibrium Model on Three-Dimensional Calculations of Flow and Sediment Transport, 953

Three-dimensional models

3D Surface Modeling and Measuring System for Pneumatic Caisson, 282

Effect of Intermediate Diaphragms on Decked Bulb-Tee Bridge System for Accelerated Construction, 162

Exchange Model and Exchange Object Concepts for Implementation of National BIM Standards, 264

Methodology to Analyze Sun Glare Related Safety Problems at Highway Tunnel Exits, 1846

Teaching Building Information Modeling as an Integral Part of Freshman Year Civil Engineering Education, 1585

Three-Dimensional Finite-Element Modeling of Nailed Connections in Wood, 1678

Understanding and Managing Three-Dimensional/Four-Dimensional Model Implementations at the Project Team Level, 389

Tidal currents

Discharge Estimation in a Tidal River with Partially Reverse Flow, 2053

Undular Tidal Bores: Basic Theory and Free-Surface Characteristics, 1041

Unsteady Turbulence in Tidal Bores: Effects of Bed Roughness, 2051

Timber construction

Experimental Study on Full-Scale Light Frame Wood House under Lateral Load, 1687

In-Plane Experimental Testing of Timber-Concrete Composite Floor Diaphragms, 1750

Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

New Yield Model for Wood Dowel Connections, 1731

Performance of Log Shear Walls Subjected to Monotonic and Reverse-Cyclic Loading, 1609

Strength Prediction for Rounded Dovetail Connections Considering Size Effects, 494

Time dependence

Development and Empirical Study of Real-Time Simulation-Based Dynamic Traffic Assignment Model, 1897

Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822

Parametric Study of Posttensioned Inverted-T Bridge System for Improved Durability and Increased Span-to-Depth Ratio, 164

Seismic Rotational Displacements of Gravity Walls by Pseudodynamic Method with Curved Rupture Surface, 21

Temporal Scales for Live-Bed Scour at Abutments, 985

Time Effects Relate to Crushing in Sand, 893

Time-Dependent Behavior of Concrete-Filled Steel Tubular Arch Bridge, 104

Travelers' Response to Value Pricing: Application of Departure Time Choices to TRANSIMS, 1875

Time factors

Application of a SOM-Based Optimization Algorithm in Minimizing Construction Time for Secant Pile Wall, 432

Causes of Delay in the Planning and Design Phases for Construction Projects, 84

Effect of Time Scale on the Performance of Different Sediment Transport Formulas in a Semiarid Region, 947

Empirical Analysis of Toll-Lane Processing Times Using Proportional Odds Augmented MARS, 1900

Influence of Platform Walking on BRT Station Bus Dwell Time Estimation: Australian Analysis, 1915

Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

Synchronized Signal Control Model for Maximizing Progression along an Arterial, 1866

Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531

Time series analysis

Application of Hilbert-Huang Transform Method for Analyzing Toxic Concentrations in the Niagara River, 1066

Application of Two-Directional Time Series Models to Replace Missing Data, 661

Contemporaneous Time Series and Forecasting Methodologies for Predicting Short-Term Productivity, 418

Cross-Validation of Short-Term Productivity Forecasting Methodologies, 417

Estimation of Power Spectra of Acoustic-Doppler Velocimetry Data Contaminated with Intermittent Spikes, 982

Time Series Analysis of ENR Construction Cost Index, 436

Variability of *Escherichia coli* Concentrations in an Urban Watershed in Texas, 762

Tires

Beneficial Use of Shredded Tires as Drainage Material in Cover Systems for Abandoned Landfills, 2100

Detection of Vehicles with Studded Tires Using Acoustic Emission Sensors Mounted to Highway Bridges, 1839

Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116

Tire-Derived Steel for Hydrogen Sulfide Removal in Landfill Cover, 2118

Toll roads

Empirical Analysis of Toll-Lane Processing Times Using Proportional Odds Augmented MARS, 1900

Hierarchical Structuring of PPP Risks Using Interpretative Structural Modeling, 329

Toll Plaza Merging Traffic Control for Throughput Maximization, 1796

Tolls

Calibration and Verification of SHAKER, a Deterministic Toll Plaza Simulation Model, 1798

Peerless Pier Caps, 2219

Travelers' Response to Value Pricing: Application of Departure Time Choices to TRANSIMS, 1875

Topographic surveys

Terrestrial Laser Scanning for Monitoring Streambank Retreat: Comparison with Traditional Surveying Techniques, 1023

Topography

Flood Simulation Using a Well-Balanced Shallow Flow Model, 1011

Tornadoes

Tornado-Induced Wind Loads on a Low-Rise Building, 1616

Torsion

Full Torsional Behavior of RC Beams Wrapped with FRP: Analytical Model, 205

Strengthening RC T-Beams Subjected to Combined Torsion and Shear Using FRP Fabrics: Experimental Study, 206

Torsional Strength of RC Beams Considering Tension Stiffening Effect, 1741

Toughness

Effect of Low-Density Polyethylene on Fracture Toughness of Asphalt Concrete Mixtures, 1457

Influence of Antistripping Additives on Moisture Susceptibility of Warm Mix Asphalt Mixtures, 1461

Tourism

Gateway to a Getaway, 2224

Towers

Engineering the Tower and Main Span Construction of Stonecutters Bridge, 108

Influence of Flexibility on the Fatigue Performance of the Base Plate Connection in High-Mast Lighting Towers, 1639

Precise Control Survey for Erecting the Steel Pylons of the Third Nanjing Yangtze River Bridge, China: Case Study, 1769

Toxicity

Application of Hilbert-Huang Transform Method for Analyzing Toxic Concentrations in the Niagara River, 1066

Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614

Metal Contamination Characteristics of *Lepidium sativum* in a Phosphate-, Saline-, and Nitrate-Contaminated Media, 751

Traffic

Dynamic Performance Simulation of Long-Span Bridge under Combined Loads of Stochastic Traffic and Wind, 115

Traffic accidents

Assessment of Link Reliability as a Function of Congestion Components, 1886

Community-Based, Macrolevel Collision Prediction Model Use with a Regional Transportation Plan, 1802

Dynamic Incident Progression Curve for Classifying Secondary Traffic Crashes, 1912

Horizontal Curve Accident Modification Factor with Consideration of Driveway Density on Rural Four-Lane Highways in Texas, 1877

Life-Cycle Cost Analysis of Highway Intersection Safety Hardware Improvements, 1803

Real-Time Crash Risk Reduction on Freeways Using Coordinated and Uncoordinated Ramp Metering Approaches, 1832

Relationship between Access Management and Other Physical Roadway Characteristics and Safety, 1804

Reset to Zero and Specify Active Safety Systems according to Real-World Needs, 1837

Road Traffic Congestion and Crash Severity: Econometric Analysis Using Ordered Response Models, 1833

Simulation-Based Assessment of Vehicle Safety Behavior under Hazardous Driving Conditions, 1822

Simulation-Based Secondary Incident Filtering Method, 1868

What Is the Role of Multiple Secondary Incidents in Traffic Operations?, 1895

Traffic analysis

Effect of Surrounding Traffic Characteristics on Lane Changing Behavior, 1894

Influence of Vertical Sensor Placement on Data Collection Efficiency from Bluetooth MAC Address Collection Devices, 1907

Traffic assignment

Delay Function for Signalized Intersections in Traffic Assignment Models, 1924

Development and Empirical Study of Real-Time Simulation-Based Dynamic Traffic Assignment Model, 1897

Evaluation of VMS-Based Traffic Information Using Multiclass Dynamic Traffic Assignment Model: Experience in Kolkata, 1928

Origin-Based Partial Linearization Method for the Stochastic User Equilibrium Traffic Assignment Problem, 1794

Simulation-Based Analysis of Train Controls under Various Track Alignments, 1890

Traffic capacity

Effect of Gradient and Its Length on Performance of Vehicles under Heterogeneous Traffic Conditions, 1909

Estimation of Capacity of Two-Lane Two-Way Highways Using Simulation Model, 1795

Microscopic Traffic Simulation Approach to the Capacity Impact Analysis of Weaving Sections for the Exclusive Bus Lanes on an Urban Expressway, 1885

Microsimulation Study of Effect of Volume and Road Width on PCU of Vehicles under Heterogeneous Traffic, 1908

Perceived Level of Service, Driver, and Traffic Characteristics: Piecewise Linear Model, 1884

Traffic congestion

Assessment of Link Reliability as a Function of Congestion Components, 1886

Assessment of the Pedestrianization Policy in Vigan City: UNESCO World Heritage Site, 1918

Effect of Surrounding Traffic Characteristics on Lane Changing Behavior, 1894

Road Traffic Congestion and Crash Severity: Econometric Analysis Using Ordered Response Models, 1833

Synchronized Signal Control Model for Maximizing Progression along an Arterial, 1866

VCI, a Regional Volume/Capacity Index Model of Urban Congestion, 1801

Weaving Section Flow Model at the Weaving Area of Malaysian Conventional Roundabout, 1872

Traffic control devices

Proportion-Based Format System for Freeway and Expressway Guide Signs, 1818

Traffic delay

Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923

Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194

Modeling and Simulation of Traffic Movements at Semiactuated Signalized Intersections, 1847

Simulation-Based Secondary Incident Filtering Method, 1868

Traffic engineering

Estimation of Capacity of Two-Lane Two-Way Highways Using Simulation Model, 1795

Older Drivers' Perception and Acceptance of In-Vehicle Devices for Traffic Safety and Traffic Efficiency, 1838

Traffic flow

Bidirectional Pedestrian Stream Model with Oblique Intersecting Angle, 1815

Calibration and Verification of SHAKER, a Deterministic Toll Plaza Simulation Model, 1798

Comparative Analysis of Compact Multilane Roundabouts and Turbo-Roundabouts, 1823

Delay Function for Signalized Intersections in Traffic Assignment Models, 1924

L_w-Norm Path Flow Estimator for Handling Traffic Count Inconsistencies: Formulation and Solution Algorithm, 1848

Proper Presentation of Flow-Speed-Density Plots of Large Data Sets, 1861

Road Traffic Congestion and Crash Severity: Econometric Analysis Using Ordered Response Models, 1833

Short-Term Prediction of Urban Traffic Variability: Stochastic Volatility Modeling Approach, 1853

Traffic management

Assessment of the Pedestrianization Policy in Vigan City: UNESCO World Heritage Site, 1918

Car-Following Interaction and the Definition of Free-Moving Vehicles on Two-Lane Rural Highways, 1888

Development of a Large-Scale Traffic Simulation Model for Hurricane Evacuation—Methodology and Lessons Learned, 2091

Dynamic Incident Progression Curve for Classifying Secondary Traffic Crashes, 1912

Empirical Analysis of Toll-Lane Processing Times Using Proportional Odds Augmented MARS, 1900

Gateway to a Getaway, 2224

Influence of HOV Lane Access on HOV Lane Utilization, 1899

Interactive Process of Microsimulation and Logistic Regression for Short-Term Work Zone Traffic Diversion, 1816

Methods for Enlarging Transportation Tunnels while Keeping Tunnels Fully Operational, 2155

Microsimulation Study of the Effect of Exclusive Bus Lanes on Heterogeneous Traffic Flow, 1922

Pedestrian Flow Characteristics in Mixed Traffic Conditions, 1919

Perceived Level of Service, Driver, and Traffic Characteristics: Piecewise Linear Model, 1884

Performance Evaluation of No Track Thermoplastic Traffic Markings, 1896

Stated Preference Approach for Valuation of Travel Time Displayed as Traffic Information on a VMS Board, 1941

Toll Plaza Merging Traffic Control for Throughput Maximization, 1796

Traffic and Transportation Studies 2010, 2289

Travel Demand Model for Beijing 2008 Olympic Games, 1845

Traffic models

Community-Based, Macrolevel Collision Prediction Model Use with a Regional Transportation Plan, 1802

Detecting Unsafe Roadways with Spatial Statistics: Point Patterns and Geostatistical Models, 1836

Development and Empirical Study of Real-Time Simulation-Based Dynamic Traffic Assignment Model, 1897

Effect of Gradient and Its Length on Performance of Vehicles under Heterogeneous Traffic Conditions, 1909

Estimation of Capacity of Two-Lane Two-Way Highways Using Simulation Model, 1795

Microsimulation Study of Effect of Volume and Road Width on PCU of Vehicles under Heterogeneous Traffic, 1908

Perceived Level of Service, Driver, and Traffic Characteristics: Piecewise Linear Model, 1884

Road Traffic Congestion and Crash Severity: Econometric Analysis Using Ordered Response Models, 1833

Short-Term Prediction of Urban Traffic Variability: Stochastic Volatility Modeling Approach, 1853

Signal Treatments to Reduce the Likelihood of Heavy Vehicle Crashes at Intersections: Microsimulation Modeling Approach, 1856

Theoretical Framework for Modeling Pedestrians' Crossing Behavior along a Trip, 1887

Traffic Modeling and College-Bus Routing Using Entropy Maximization, 1800

Traffic safety

Assessment of the Pedestrianization Policy in Vigan City: UNESCO World Heritage Site, 1918

Community-Based, Macrolevel Collision Prediction Model Use with a Regional Transportation Plan, 1802

Detecting Unsafe Roadways with Spatial Statistics: Point Patterns and Geostatistical Models, 1836

Differences in Off-Road Glances: Effects on Young Drivers' Performance, 1831

Dynamic Incident Progression Curve for Classifying Secondary Traffic Crashes, 1912

How Lane Arrangements on Freeway Mainlines and Ramps Affect Safety of Freeways with Closely Spaced Entrance and Exit Ramps, 1854

ICCTP 2010, 2257

Methodology to Analyze Sun Glare Impact on Highway under Prolonged Exposure, 1910

Methodology to Analyze Sun Glare Related Safety Problems at Highway Tunnel Exits, 1846

Older Drivers' Perception and Acceptance of In-Vehicle Devices for Traffic Safety and Traffic Efficiency, 1838

Real-Time Crash Risk Reduction on Freeways Using Coordinated and Uncoordinated Ramp Metering Approaches, 1832

Relationship between Access Management and Other Physical Roadway Characteristics and Safety, 1804

Right Turns on Green and Pedestrian Level of Service: Statistical Assessment, 1

Roadway Lighting Shows Safety Benefits at Rural Intersections, 1891

Signal Treatments to Reduce the Likelihood of Heavy Vehicle Crashes at Intersections: Microsimulation Modeling Approach, 1856

Simulation-Based Secondary Incident Filtering Method, 1868

Stochastic Dilemma Hazard Model at High-Speed Signalized Intersections, 1835

Systematic Framework for Incorporating Safety in Network-Level Transportation Planning and Programming, 1834

Theoretical Framework for Modeling Pedestrians' Crossing Behavior along a Trip, 1887

Traffic and Transportation Studies 2010, 2289

Transferability of Community-Based Collision Prediction Models for Use in Road Safety Planning Applications, 1882

What Is the Role of Multiple Secondary Incidents in Traffic Operations?, 1895

Traffic signals

Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923

Comparative Analysis of Unconditional and Conditional Priority for Use at Isolated Signalized Intersections, 1906

Delay Function for Signalized Intersections in Traffic Assignment Models, 1924

Fatigue Testing of Stiffened Traffic Signal Structures, 1726

Investigating the Impacts of Green Signal Countdown Devices: Empirical Approach and Case Study in China, 1901

Modeling and Simulation of Traffic Movements at Semiactuated Signalized Intersections, 1847
Right Turns on Green and Pedestrian Level of Service: Statistical Assessment, 1
Signal Treatments to Reduce the Likelihood of Heavy Vehicle Crashes at Intersections: Microsimulation Modeling Approach, 1856
Stochastic Dilemma Hazard Model at High-Speed Signalized Intersections, 1835
Synchronized Signal Control Model for Maximizing Progression along an Arterial, 1866

Traffic signs
Evaluation of VMS-Based Traffic Information Using Multiclass Dynamic Traffic Assignment Model: Experience in Kolkata, 1928
Proportion-Based Format System for Freeway and Expressway Guide Signs, 1818

Traffic speed
Effect of Gradient and Its Length on Performance of Vehicles under Heterogeneous Traffic Conditions, 1909
Factors Affecting Driver Speed Choice along Two-Lane Rural Highway Transition Zones, 1869
Investigating the Impacts of Green Signal Countdown Devices: Empirical Approach and Case Study in China, 1901
Microsimulation Study of Effect of Volume and Road Width on PCU of Vehicles under Heterogeneous Traffic, 1908
Microsimulation Study of the Effect of Exclusive Bus Lanes on Heterogeneous Traffic Flow, 1922
Operational Requirements for Long-Span Bridges under Strong Wind Events, 107
Pedestrian Flow Characteristics in Mixed Traffic Conditions, 1919
Proper Presentation of Flow-Speed-Density Plots of Large Data Sets, 1861
Speed Prediction Models for Multilane Highways: Simultaneous Equations Approach, 1880

Traffic volume
Effect of Gradient and Its Length on Performance of Vehicles under Heterogeneous Traffic Conditions, 1909
L_{∞}-Norm Path Flow Estimator for Handling Traffic Count Inconsistencies: Formulation and Solution Algorithm, 1848
Microsimulation Study of Effect of Volume and Road Width on PCU of Vehicles under Heterogeneous Traffic, 1908
Pedestrian Flow Characteristics in Mixed Traffic Conditions, 1919

Training
Case for Expanding the Claim Dispute Resolution Training of TxDOT Personnel, 1314
Learning Applications in the Architectural Engineering Educational Setting, 90
Pavement Interactive: Pavement Knowledge Transfer with Web 2.0, 1914
Practical Summer Training in Civil and Construction Engineering for Cultivation of Professional Ability, 1605

Transducers
p-Wave Reflection Imaging of Submerged Soil Models Using Ultrasound, 906

Transfer functions
Comparing Sigmoid Transfer Functions for Neural Network Multistep Ahead Streamflow Forecasting, 1085
p-Wave Reflection Imaging of Submerged Soil Models Using Ultrasound, 906
Stability Analysis of Direct Integration Algorithms Applied to MDOF Nonlinear Structural Dynamics, 508

Transformations
Estimation of Influence Tensors for Eigenstressed Multiphase Elastic Media with Nonaligned Inclusion Phases of Arbitrary Ellipsoidal Shape, 562
Multiscale Wavelet-LQR Controller for Linear Time Varying Systems, 573
Noniterative Approach for Solving the Indirect Problems of Linear Reference Frame Transformations, 1784
Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394
Sensitivity-Based External Calibration of Multiaxial Loading System, 478
Transformation of the Sandler and Rubin Nonsmooth Cap Model to the Pelessone Smooth Cap Model, 526

Transient flow
Evaluation of Unsteady Wall Shear Stress by Zielke's Method, 990
Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221
Junction and Drop-Shaft Boundary Conditions for Modeling Free-Surface, Pressurized, and Mixed Free-Surface Pressurized Transient Flows, 1015
Numerical Modeling for Hydraulic Resonance in Hydropower Systems Using Impulse Response, 1039
Simplified versus Detailed Two-Dimensional Approaches to Transient Flow Modeling in Urban Areas, 970

Transient response
Dynamic Response Solution in Transient State of Viscoelastic Road under Moving Load and Its Application, 475
Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975
Triaxial Deformation Behavior of Bituminous Mixes, 1353

Transients
Delay Correlation of Mechanical Hysteresis and Damping, 1613
Nonconservative Formulation of Unsteady Pipe Flow Model, 993

Transport phenomena
Predictive Modeling of Transient Storage and Nutrient Uptake: Implications for Stream Restoration, 1049

Transportation corridors
Evaluating Unplanned Stand-Alone Transportation Projects: Linking Incremental and Comprehensive Planning, 1952
Rating Sustainability: Transportation Investments in Urban Corridors as a Case Study, 1937

Transportation management
Assessing the Agreement among Pavement Condition Indexes, 1870
Assessment of Policies toward an Environmentally Friendly Urban Transport System: Case Study of Delhi, India, 1926
Challenges in Transportation Planning for Asian Cities, 1916
Community-Based, Macrolevel Collision Prediction Model Use with a Regional Transportation Plan, 1802
Green Streets and Highways 2010, 2250
Health Impacts of Urban Development and Transportation Systems, 1940
ICCTP 2010, 2257
Locked or Liberated: East Somerville, a Transit-Oriented Development Opportunity, 2067
Modeling Generalized Cost of Travel and Its Application for Improvement of Taxies in Kolkata, 1921
Multimodal Feeder Network Design Problem: Ant Colony Optimization Approach, 1824
Optimum Location of Motorway Interchanges: Users' Perspective, 1892
Primary Schools' Territorial Policy and Active Commuting: Institutional Influences in Montreal and Trois-Rivières, 1948
Promoting Sustainability through Transportation Infrastructure? Innovation and Inertia in the Kansas City Metropolitan Area, 1950
Proper Presentation of Flow-Speed-Density Plots of Large Data Sets, 1861
Systematic Framework for Incorporating Safety in Network-Level Transportation Planning and Programming, 1834
Traffic and Transportation Studies 2010, 2289

Transportation models
Exploring Best-Fit Hazard Functions and Lifetime Regression Models for Urban Weekend Activities: Case Study, 1817
Highway Improvement Project Rankings due to Uncertain Model Inputs: Application of Traditional Transportation and Land Use Models, 1949

Transportation networks
Highway Improvement Project Rankings due to Uncertain Model Inputs: Application of Traditional Transportation and Land Use Models, 1949
Highway Network Retrofit under Seismic Hazard, 1182
Multicriteria Group Decision-Making Technique for a Low-Class Road Maintenance Program, 1183

Transverse loads
Determination of the Transverse Resistance Characteristics in Railway Track, 1902

Transverse shear
Analysis of Reinforced Concrete Shells with Transverse Shear Forces, 1690
Local Delamination Buckling of Laminated Composite Beams Using Novel Joint Deformation Models, 514

Transverse waves
Water Well Resonance Induced by Preearthquake Signals, 575

Travel demand
Exploring Best-Fit Hazard Functions and Lifetime Regression Models for Urban Weekend Activities: Case Study, 1817
Travel Demand Model for Beijing 2008 Olympic Games, 1845
Travelers' Response to Value Pricing: Application of Departure Time Choices to TRANSIMS, 1875

Travel modes
Modeling Destination Choice Behavior Incorporating Spatial Factors, Individual Sociodemographics, and Travel Mode, 1874

Travel patterns
Exploring Best-Fit Hazard Functions and Lifetime Regression Models for Urban Weekend Activities: Case Study, 1817

Travel time
Assessment of Link Reliability as a Function of Congestion Components, 1886
Estimating an Impedance-to-Flow Parameter for Flood Peak Prediction in Semiarid Watersheds, 1074
Influence of Vertical Sensor Placement on Data Collection Efficiency from Bluetooth MAC Address Collection Devices, 1907
Lake Effect in Wellhead Protection, 2000
Microsimulation Study of the Effect of Exclusive Bus Lanes on Heterogeneous Traffic Flow, 1922
Simulation-Based Analysis of Train Controls under Various Track Alignments, 1890
Space Development Modeling of Urban Regions in Developing Countries, 1925
Stated Preference Approach for Valuation of Travel Time Displayed as Traffic Information on a VMS Board, 1941
Using GPS Data to Gain Insight into Public Transport Travel Time Variability, 1855

Trenches
Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517

Trenchless technology
Effectiveness of Viscoelastic Models for Prediction of Tensile Axial Strains during Cyclic Loading of High-Density Polyethylene Pipe, 1570
Ranking of the Factors Affecting Productivity of Microtunneling Projects, 1566
Trenchless Renewal of Culverts and Storm Sewers, 2291

Triaxial tests
Application of Shakedown Theory in Characterizing Traditional and Recycled Pavement Base Materials, 1813
Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction, 1465
Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822
Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26
Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands, 517
Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands
Micromechanical Modeling for Inherent Anisotropy in Granular Materials, 539
Prediction of Permanent Deformations in Pavements Using a High-Cycle Accumulation Model, 845
Shakedown Approaches to Rut Depth Prediction in Low-Volume Roads, 600

Time Effects Relate to Crushing in Sand, 893
Triaxial Deformation Behavior of Bituminous Mixes, 1353

Trickle irrigation
Assessing Pressure Changes in an On-Demand Water Distribution System on Drip Irrigation Performance—Case Study in Italy, 1229
Comparison of Different Irrigation Methods Based on the Parametric Evaluation Approach in Abbas Plain: Iran, 1213
Experimental Study on the Multisegment Regime of the Water Flow in Drip Emitters, 1228
Integrated Emitter Local Loss Prediction Using Artificial Neural Networks, 1200

Trickling filters
Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas. I, 9

Trip frequencies
Genetic Algorithm for Bus Frequency Optimization, 1849

Tropical regions
Air Temperature Distribution and the Influence of Sky View Factor in a Green Singapore Estate, 1946

Trucks
Effect of Surrounding Traffic Characteristics on Lane Changing Behavior, 1894
Importance of the Tail in Truck Weight Modeling for Bridge Assessment, 114
Kernel-Based Machine Learning Models for Predicting Daily Truck Volume at Seaport Terminals, 1911
Load Configuration and Lateral Distribution of NATO Wheeled Military Trucks for Steel I-Girder Bridges, 165
Modeling Skid Resistance of Commercial Trucks on Highways, 1842

Trusses
Bidirectional Seismic Behavior of Controlled Rocking Four-Legged Bridge Steel Truss Piers, 1754
C. Shaler Smith, 113
Comparison of Block-Shear and Whitmore Section Methods for Load Rating Existing Steel Truss Gusset Plate Connections, 110
Damage Identification in a Truss Tower by Regularized Model Updating, 1637
Rapid Ranking Procedures for Gusset Plate Connections in Existing Steel Truss Bridges, 149
Seismic Testing of a Bridge Steel Truss Pier Designed for Controlled Rocking, 1755
Stability Capacity of Metal Plate Connected Wood Truss Assemblies, 1679
Truss Modeling of Concrete Columns in Compression, 558

Tsunamis
Building Damage due to Riverine and Coastal Floods, 1992
Gender and Age Factors in Tsunami Casualties, 2080
Impulse Product Parameter in Landslide Generated Impulse Waves, 2043
New Methodology for Laboratory Generation of Solitary Waves, 2055
One-Dimensional Study on Propagation of Tsunami Wave in River Channels, 950
Tsunami Preparedness on the Oregon and Washington Coast: Recommendations for Research, 2085
Wind Storm and Storm Surge Mitigation, 2295

Tubes
Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188
Analytical Studies of Concrete-Filled Circular Steel Tubes under Axial Compression, 1664
Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512
Composite Flexural Behavior of Full-Scale Concrete-Filled Tubes without Axial Loads, 1744
Damping Parameter Identification and Study of Metal Foam Filled Steel Tube, 1384
Mixed Finite Element for Three-Dimensional Nonlinear Dynamic Analysis of Rectangular Concrete-Filled Steel Tube Beam-Columns, 592
Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672
Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238
Strength and Stiffness of Circular Concrete-Filled Tubes, 1757
Tests and Analysis of Cantilevered GFRP Tubular Poles with Partial Concrete Filling, 187

Tunneling
Comparison between Models of Rock Discontinuity Strength and Deformation, 858
Nonlocal Multilaminate Model for Strain Softening Analysis, 15
Role of Simulation in Construction Engineering and Management, 427
Stack Pipe Model for Pipe Jacking Method, 382
Tunneling beneath Buried Pipes: View of Soil Strain and Its Effect on Pipeline Behavior, 935

Tunnels
Aerodynamic Effects Caused by Trains Entering Tunnels, 1879
Design Charts for Evaluating Impact Forces on Dissipative Granular Soil Cushions, 922
Face Stability Analysis of Circular Tunnels Driven by a Pressurized Shield, 794
Forensic Investigations to Evaluate Sulfate-Induced Heave Attack on a Tunnel Shotcrete Liner, 1446
Implementation and Application of a New Elastoplastic Model Based on a Multiaxial Criterion to Assess the Stress State near Underground Openings, 13
Methodology to Analyze Sun Glare Related Safety Problems at Highway Tunnel Exits, 1846
Methods for Enlarging Transportation Tunnels while Keeping Tunnels Fully Operational, 2155
Modeling Evapotranspiration Effects on Air Flowing in a Small Glass Roofed Tunnel, 1236
Stability of Shallow Tunnel Using Rigid Blocks and Finite-Element Upper Bound Solutions, 38

Turbidity
Valuing Drinking Water Provision as an Ecosystem Service in the Neuse River Basin, 2006

Turbines
Design of Dynamically Wind-Loaded Helical Piers for Small Wind Turbines, 1538

Influence of Mechanical Draft Tube Fish Barrier on the Hydraulic Thrust of Small Francis Turbines, 1038

Monte–Carlo Based Method for Predicting Extreme Value Statistics of Uncertain Structures, 605

New Dynamic Participation Factor for Turbine-Generator Foundations, 2135

Turbulence

Assessment of a River Reach for Environmental Fluid Dynamics Studies, 1034

Assessment of Flocculation Kinetics of Cohesive Sediments from the Seine and Gironde Estuaries, France, through Laboratory and Field Studies, 2057

Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002

Case Study: Effect of Submerged Aquatic Plants on Turbulence Structure in a Lowland River, 988

CFD Analysis of Turbulent Natural Ventilation in Double-Skin Façade: Thermal Mass and Energy Efficiency, 454

Coherent Structure Dynamics in Turbulent Flows Past In-Stream Structures: Some Insights Gained via Numerical Simulation, 1046

Energy Dissipation and Turbulent Production in Weak Hydraulic Jumps, 952

Estimation of Power Spectra of Acoustic-Doppler Velocimetry Data Contaminated with Intermittent Spikes, 982

Estimation of the Washout Depth of Fine Sediments from a Granular Bed, 1022

Investigation of Turbulence Effects on Torsional Divergence of Long-Span Bridges by Using Dynamic Finite-Element Method, 155

Laboratory Measurements on Turbulent Pressure Fluctuations in and above Gravel Beds, 1021

Penetration Length of Confined Counter Flowing Free Jets, 961

Physically Realistic Roughness Closure Scheme to Simulate Turbulent Channel Flow over Rough Beds within the Framework of LES, 1026

Stability Characteristics for Transport Aircraft Response to Clear-Air Turbulence, 61

Stability of Stones under Uniform Flow, 954

Turbulence Characteristics in Flows Subjected to Boundary Injection and Suction, 544

Turbulent Flow near Vertical Angled Fish Screen, 1042

Unsteady Turbulence in Tidal Bores: Effects of Bed Roughness, 2051

Turbulent diffusion

Depth-Averaged Shear Stress and Velocity in Open-Channel Flows, 1043

Turbulent flow

Assessment of Rheological Characteristics of a Natural Bingham-Plastic Mixture in Turbulent Pipe Flow, 1027

Experimental Study of Three-Dimensional Flow Field around a Complex Bridge Pier, 473

Nonintrusive Method for Detecting Particle Movement Characteristics near Threshold Flow Conditions, 1284

Simplified Numerical and Analytical Approach for Solutes in Turbulent Flow Reacting with Smooth Pipe Walls, 1005

Turbulence Characteristics in Flows Subjected to Boundary Injection and Suction, 544

Turbulent Flow through Idealized Emergent Vegetation, 1048

Turkey

Building Capacity through Collaborative Local Action: Case of Matra REGIMA within Zeytinburnu Regeneration Scheme, 1936

Evaluation of 10-Year Temperature Differences between Urban and Rural Areas of a Well-Planned, Unindustrialized, and Medium-Sized Turkish Town, Erzincan, 1955

Impact of Irrigation Management Transfer on Land and Water Productivity and Water Supply in the Gediz Basin, Turkey, 1233

Intrametropolitan Determinants of Foreign Investment Firms in Istanbul, 1943

Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420

Seismic Sophistication, 2191

Structural Analyses and Assessment of Historical Kamanlı Mosque in Izmir, Turkey, 1531

Turkish Land Readjustment: Good Practice in Urban Development, 1958

Two phase flow

Experimental Study of Particle Motion on a Smooth Bed under Shoaling Waves Using Particle Image Velocimetry, 543

Experimental Study of Sand and Slurry Jets in Water, 1017

Self-Aeration and Friction over Rock Chutes in Uniform Flow Conditions, 1044

Setting Up a Numerical Model of a DAF Tank: Turbulence Geometry, and Bubble Size, 771

Two-dimensional analysis

Probability Analysis of Hydrological Loads for the Design of Flood Control Systems Using Copulas, 1092

Two-dimensional flow

Bidirectional Pedestrian Stream Model with Oblique Intersecting Angle, 1815

Truncating Cross-Sectional Groundwater Models under Wetlands, 1110

Two-dimensional models

Gauging Rivers during All Seasons Using the Q2D Velocity Index Method, 963

Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053

Lattice Boltzmann Model for the Simulation of Flows in Open Channels with Application to Flows in a Submerged Sluice Gate, 1288

Two-Dimensional Depth-Averaged Flow Modeling with an Unstructured Hybrid Mesh, 942

Typhoons

New Reference Wind Speed for Wind Turbines in Typhoon-Prone Areas in the Philippines, 1654

Ultimate strength

Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

Ultrasonic methods

Influence of Surface Condition on the Inspection of Steel Bridge Elements Using the Time-of-Flight Diffraction Method, 157

Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

p-Wave Reflection Imaging of Submerged Soil Models Using Ultrasound, 906

Removal of Hexachlorobenzene and Phenanthrene from Clayey Soil by Surfactant- and Ultrasound-Assisted Electrokinetics, 696

Ultraviolet radiation

Evaluation of UV LEDs Performance in Photochemical Oxidation of Phenol in the Presence of H_2O_2, 640

Laboratory Study on Ultraviolet Radiation Aging of Bitumen, 1427

Photocatalytic Degradation of Orange II in Aqueous Iron-Rich Montmorillonite Solutions, 626

Photoreduction of Reactive Brilliant Red X-3B by Ultraviolet Irradiation/Potassium Borohydride/Sodium Bisulfite, 758

Practical Method to Extract and Dechlorinate PCBs in Soils, 2105

Removal of Toluene Using UV-Irradiated and Nonthermal Plasma–Driven Photocatalyst System, 747

Uncertainty principles

Application of Innovative Critical Chain Method for Project Planning and Control under Resource Constraints and Uncertainty, 419

Comparative Study of Static and Dynamic Falling Weight Deflectometer Back-Calculations Using Probabilistic Approach, 1811

Computerized DSS for Construction Conflict Resolution under Uncertainty, 438

Dual-Interval Fuzzy Stochastic Programming Method for Long-Term Planning of Municipal Solid Waste Management, 279

Effect of Watershed Subdivision on SWAT Modeling with Consideration of Parameter Uncertainty, 1161

Estimation of Probabilistic Extreme Wind Load Effects: Combination of Aerodynamic and Wind Climate Data, 532

Estimation of Uncertainty in Long-Term Sewer Sediment Predictions Using a Response Database, 986

Fuzzy Nonlinear Regression Approach to Stage-Discharge Analyses: Case Study, 1060

Global Dimension of Robust Project Network Design, 358

Highway Improvement Project Rankings due to Uncertain Model Inputs: Application of Traditional Transportation and Land Use Models, 1949

Impact of Heterogeneity on Gamma-Spectrometry Data at Nondestructive Assay of Radioactive Waste, 2117

Inexact Community-Scale Energy Systems Planning Model, 1939

Influence of Input Motion and Site Property Variabilities on Seismic Site Response Analysis, 833

Knowledge and Data Integration for Modeling of Problems of Risk due to Natural and Man-Made Hazards, 2120

Modeling Radar Rainfall Estimation Uncertainties: Random Error Model, 1084

Monte–Carlo Based Method for Predicting Extreme Value Statistics of Uncertain Structures, 605

Multimodel Structural Performance Monitoring, 1736

Performance Evaluation and Uncertainty Measurement in Irrigation Scheduling Soil Water-Balance Approach, 1280

Probabilistic Analysis of Soil-Water Characteristic Curves, 817

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. I: Bridge Modeling, Parametric Analysis, and Retrofit Design, 137

Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. II: Fragility Analysis, Fragility Curves, and Fragility Surfaces, 138

Sensitivity Analysis for an Infiltration-Runoff Model with Parameter Uncertainty, 1122

Structural Uncertainty Effect on Classical Wing Flutter Characteristics, 74

Terrestrial Laser Scanning for Monitoring Streambank Retreat: Comparison with Traditional Surveying Techniques, 1023

Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth, 917

Undergraduate study

Cultivating Research and Information Skills in Civil Engineering Undergraduate Students, 1584

Underground construction

Deep and Underground Excavations (GSP 206), 2232

Underwater pipelines

Large Deformation Finite-Element Analysis of Submarine Landslide Interaction with Embedded Pipelines, 27

Parametric Solutions for Slide Impact on Pipelines, 866

Uniform flow

Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136

Self-Aeration and Friction over Rock Chutes in Uniform Flow Conditions, 1044

Stability of Stones under Uniform Flow, 954

United Arab Emirates

The Burj Khalifa Triumphs: Reaching toward The Heavens, 2170

Combined Effort, 2201

Combined Effort

United Kingdom

Aligned with Nature, 2220

Building Robustness Research during World War II, 1549

Coupled 1D–Quasi-2D Flood Inundation Model with Unstructured Grids, 994

Estimation of Uncertainty in Long-Term Sewer Sediment Predictions Using a Response Database, 986

Housing Law Is Dead. Long Live European Housing Law?, 1295

A New Approach, 2165

New Life for an Old Line, 2192

Structural Design of the DRL-10 Space Pavilion, 88

United States

Analysis of Dispute Review Boards Application in U.S. Construction Projects from 1975 to 2007, 1324

Box-and-Ellipse-Based ANFIS for Bridge Coating Assessment, 297

Comparison of Contract General Conditions between United States and China, 89

Dynamic Compaction of Collapsible Soils Based on U.S. Case Histories, 890

Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Enabling Development of the Transportation Public-Private Partnership Market in the United States, 354
Entering the Mainstream, 2203
Free and Secure Trade Commercial Vehicle Crossing Times at the Pacific Highway Port of Entry, 1889
Integral Abutment Bridges: The European Way, 2150
International Instruments on Housing Rights, 1294
Maximizing the Sustainability of Integrated Housing Recovery Efforts, 393
Revisiting the Gathering Storm, 2222
Supporting the Winds of Change, 2205

United States Air Force

Estimation of Cost Contingency for Air Force Construction Projects, 431
MBTI Personality and Hemisphericity of a U.S. Air Force Group, 2072

United States Army Corps of Engineers

Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309
Integrated Planning Framework for Urban River Rehabilitation, 2029

Universities

Successful Leadership Development for Women STEM Faculty, 2075

Unsaturated flow

Capillary Shape: Influence on Water Transport within Unsaturated Alkali Activated Slag Concrete, 1369
Evaporation, Unsaturated Flow, and Salt Accumulation in Multilayer Deposits of "Paste" Gold Tailings, 939
Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Unsaturated soils

Centrifuge Permeameter for Unsaturated Soils. I: Theoretical Basis and Experimental Developments, 878
Centrifuge Permeameter for Unsaturated Soils. II: Measurement of the Hydraulic Characteristics of an Unsaturated Clay, 879
Determining the Shapes of Yield Curves for Unsaturated Soils by Modified State Surface Approach, 796
Effect of Fine Particle Migration on the Small-Strain Stiffness of Unsaturated Soils, 834
Experimental and Applied Modeling of Unsaturated Soils (GSP 202), 2243
Experimental Study on Moisture Migration in Unsaturated Loess under Effect of Temperature, 172
Field Infiltration Characteristics of Natural Rainfall in Compacted Roadside Slopes, 797
Impacts of Unsaturated Zone Soil Moisture and Groundwater Table on Slope Instability, 914
Influence of Osmotic Suction on the Soil-Water Characteristic Curves of Compacted Expansive Clay, 938
Is Matric Suction a Stress Variable?, 3
Microporosity Structure of Coarse Granular Soils, 912
Probabilistic Analysis of Soil-Water Characteristic Curves, 817
Shear Strength Equations for Unsaturated Soil under Drying and Wetting, 832
State Boundary Surfaces for an Aged Compacted Clay, 897
Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas, 826
Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas
Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Unsteady flow

Channel Bed Slope Effect on the Height of Gravity Waves Produced by a Sudden Downstream Discharge Stoppage, 976
Effect of Flood Recession on Scouring at Bed Sills, 964
Evaluation of Unsteady Wall Shear Stress by Zielke's Method, 990
External Iterative Coupling Strategy for Surface-Subsurface Flow Calculations in Surface Irrigation, 1276
Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221
Junction and Drop-Shaft Boundary Conditions for Modeling Free-Surface, Pressurized, and Mixed Free-Surface Pressurized Transient Flows, 1015
Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231
Modeling Unsteady Flow Characteristics of Hydropeaking Operations and Their Implications on Fish Habitat, 1052
Modeling Unsteady Open-Channel Flow for Controller Design, 1243
Nonconservative Formulation of Unsteady Pipe Flow Model, 993
Numerical Simulation Software for Oil Sand Slurry Flow in Flexible Pipelines, 452

Uplifting

Distortional Buckling of Cold-Formed Steel Shear Wall Studs under Uplift Force, 1638
Effect of Fastener-Deck Strength on the Wind-Uplift Performance of Mechanically Attached Roofing Assemblies, 2131
Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710
Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689
Theoretical Studies of the XY-FP Seismic Isolation Bearing for Bridges, 154
Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722

Urban areas

Addressing Sustainability in Benchmarking Framework for Indian Urban Water Utilities, 1171
Building Capacity through Collaborative Local Action: Case of Matra REGIMA within Zeytinburnu Regeneration Scheme, 1936
Building Community Disaster Preparedness with Volunteers: Community Emergency Response Teams in Illinois, 2090
Challenges in Transportation Planning for Asian Cities, 1916
Clearing the Utilities on Time and Under Budget, 2064
Contribution of Traffic-Generated Nonexhaust PAHs, Elemental Carbon, and Organic Carbon Emission to Air and Urban Runoff Pollution, 774
Design Criteria of Urban Drainage Infrastructures under Climate Change, 1979
Design of Integrated Bioinfiltration-Detention Urban Retrofits with Design Storm and Continuous Simulation Methods, 1104

Design Robustness of Local Water-Recycling Schemes, 2012

Discontinuous Galerkin Finite-Element Method for Simulation of Flood in Crossroads, 992

Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628

Ecological Corridor in the Urban Area: Case Study in Kaohsiung City, Taiwan, 2103

Effects of Urbanization on Groundwater, 2239

Evaluating Urban Pollutant Buildup/Wash-Off Models Using a Madison, Wisconsin Catchment, 630

Evaluation of 10-Year Temperature Differences between Urban and Rural Areas of a Well-Planned, Unindustrialized, and Medium-Sized Turkish Town, Erzincan, 1955

Evaluation of Methods for Representing Urban Terrain in Storm-Water Modeling, 1055

Experimental Investigation of a Vortex-Flow Restrictor: Rain-Blocker Performance Tests, 998

Explanation for Anomalous Readings during Monitoring of a Best Management Practice, 1258

Exploring Best-Fit Hazard Functions and Lifetime Regression Models for Urban Weekend Activities: Case Study, 1817

Flash Flooding in the Philadelphia Metropolitan Region, 1058

Human-Environment Interactions Based on Biophilia Values in an Urban Context: Case Study, 1935

Hydrologic Performance Monitoring of an Underdrained Low-Impact Development Storm-Water Management System, 1237

Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Integrated Planning Framework for Urban River Rehabilitation, 2029

Ka Loko Dam Break, 1310

Linking Pathogen Sources to Water Quality in Small Urban Streams, 637

Low Impact Development 2010, 2262

Measuring Transfer Efficiency of Urban Public Transportation Terminals by Data Envelopment Analysis, 1951

Method of Superimposition for Suction Force on Trash Rack, 1285

Microscopic Traffic Simulation Approach to the Capacity Impact Analysis of Weaving Sections for the Exclusive Bus Lanes on an Urban Expressway, 1885

Modeling and Sizing Bioretention Using Flow Duration Control, 1097

Modeling Generalized Cost of Travel and Its Application for Improvement of Taxies in Kolkata, 1921

Modeling Urban Storm-Water Quality Treatment: Model Development and Application to a Surface Sand Filter, 616

Multiobjective Evolutionary Approach to Rehabilitation of Urban Drainage Systems, 2014

New Approach to Evaluate Pollutant Removal by Storm-Water Treatment Devices, 653

New Insights into the Quality of Urban Storm Water in South Eastern Australia, 654

Observed and Modeled Performances of Prototype Green Roof Test Plots Subjected to Simulated Low- and High-Intensity Precipitations in a Laboratory Experiment, 1100

Optimal Distribution and Control of Storage Tank to Mitigate the Impact of New Developments on Receiving Water Quality, 648

Probabilistic Approach to Estimation of Urban Storm-Water TMDLs: Regulated Catchment, 1270

Putting Cities Back on Their Feet, 1942

Remarks on Camp's Criterion for Self-Cleansing Storm Sewers, 1216

Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623

Short-Duration Rainfall Intensity Equations for Urban Drainage Design, 1257

Short-Term Prediction of Urban Traffic Variability: Stochastic Volatility Modeling Approach, 1853

Simplified versus Detailed Two-Dimensional Approaches to Transient Flow Modeling in Urban Areas, 970

Synchronized Signal Control Model for Maximizing Progression along an Arterial, 1866

Thermal Reduction by an Underground Storm-Water Detention System, 671

TMDLs in the Urban Environment, 2288

Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103

Using a Distributed Hydrologic Model to Evaluate the Location of Urban Development and Flood Control Storage, 2020

Variability of *Escherichia coli* Concentrations in an Urban Watershed in Texas, 762

Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171

VCI, a Regional Volume/Capacity Index Model of Urban Congestion, 1801

Willingness to Shift to Walking or Bicycling to Access Suburban Rail: Case Study of Mumbai, India, 1917

Urban development

Assessing the Impact of Land Use/Land Cover on Urban Heat Island Pattern in Nanjing City, China, 1957

Evaluating Unplanned Stand-Alone Transportation Projects: Linking Incremental and Comprehensive Planning, 1952

Evaluation of 10-Year Temperature Differences between Urban and Rural Areas of a Well-Planned, Unindustrialized, and Medium-Sized Turkish Town, Erzincan, 1955

Evaluation of Methods for Representing Urban Terrain in Storm-Water Modeling, 1055

Global Economic Forces' Effect upon Urban Planning: Greater Amman Case Study, 1930

Health Impacts of Urban Development and Transportation Systems, 1940

Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088

Inexact Community-Scale Energy Systems Planning Model, 1939

Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096

Intrametropolitan Determinants of Foreign Investment Firms in Istanbul, 1943

Lakefront Renaissance, 2200

Locked or Liberated: East Somerville, a Transit-Oriented Development Opportunity, 2067

Perception Studies of Vertical Greenery Systems in Singapore, 1953
Place Identity and PlaceMaker: Planning the Urban Sustainability, 1932
PPP Experiences in Indian Cities: Barriers, Enablers, and the Way Forward, 356
Quantitative Delimitation of Metropolitan Areas Based on a Synthetic Method: Case Study in the Lanzhou Metropolitan Area, 1956
Review of Bioretention System Research and Design: Past, Present, and Future, 710
Simplest Way to Reach the Most Complicated Goal: "In the Urban Planning, Questions Are Ours and Answers Are the Natives's", 1934
Space Development Modeling of Urban Regions in Developing Countries, 1925
Spatial Decision Support System for Urban Planning: Case Study of Harbin City in China, 1933
Systems Management Study of a Private Brownfield Renovation, 1945
Theory-Based SCS-CN Method and Its Applications, 1159
Transit-Oriented Land Planning Model Considering Sustainability of Mass Rail Transit, 1944
Turkish Land Readjustment: Good Practice in Urban Development, 1958
Urban Land-Use Zoning Based on Ecological Evaluation for Large Conurbations in Less Developed Regions: Case Study in Foshan, China, 1929

Utilities

Addressing Sustainability in Benchmarking Framework for Indian Urban Water Utilities, 1171
Clearing the Utilities on Time and Under Budget, 2064
Cost Estimating Models for Utility Rehabilitation Projects: Neural Networks versus Regression, 1574
Guidelines for Electrical Transmission Line Structural Loading, 2253
Integrating Global Positioning System with Laser Technology to Capture As-Built Information during Open-Cut Construction, 1580

Validation

Application of Partial Least-Squares Regression in Seasonal Streamflow Forecasting, 1116
Calibration and Verification of SHAKER, a Deterministic Toll Plaza Simulation Model, 1798
Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923
Empirical Modeling Methodologies for Construction, 318
Model Development and Validation for Intelligent Data Collection for Lateral Spread Displacements, 304
Research Validation: Challenges and Opportunities in the Construction Domain, 327
Space Development Modeling of Urban Regions in Developing Countries, 1925
Validation and Application of Empirical Liquefaction Models, 931

Value engineering

Pedagogy of Teaching Value Management in Postgraduate Construction and Property Program, 1591

Vanes

Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002

Vegetation

Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185
Case Study: Effect of Submerged Aquatic Plants on Turbulence Structure in a Lowland River, 988
Characteristics of Monami Wave in Submerged Vegetated Flow, 1073
Detrimental Effects on Coastal Concrete Structures by *Chaetomorpha Antennina*, 1440
Effect of Vegetation on Banks on Distributions of Velocity and Reynolds Stress under Accelerating Flow, 1127
Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047
Efficient Microwave Technology to Immobilize Heavy Metal Copper (Cu) Contaminated Soil by Microwave Energy, 2097
Field Evaluation of Bauxite Residue Neutralization by Carbon Dioxide, Vegetation, and Organic Amendments, 726
Hydrologic and Water Quality Aspects of Using a Compost/Mulch Blend for Erosion Control, 1272
Linear Instability Theory for Frequency Assessment of Coherent Vortices in Submerged and Aside Rigid Canopies, 1157
Perception Studies of Vertical Greenery Systems in Singapore, 1953
Physically Based Green Roof Model, 1101
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095
Riparian Vegetation Mapping for Hydraulic Roughness Estimation Using Very High Resolution Remote Sensing Data Fusion, 1032
Runoff Volume Reduction by a Level Spreader–Vegetated Filter Strip System in Suburban Charlotte, N.C., 1105
Turbulent Flow through Idealized Emergent Vegetation, 1048
Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Vehicles

Car-Following Interaction and the Definition of Free-Moving Vehicles on Two-Lane Rural Highways, 1888
Contribution of Traffic-Generated Nonexhaust PAHs, Elemental Carbon, and Organic Carbon Emission to Air and Urban Runoff Pollution, 774
Detection of Vehicles with Studded Tires Using Acoustic Emission Sensors Mounted to Highway Bridges, 1839
Dynamic Performance Simulation of Long-Span Bridge under Combined Loads of Stochastic Traffic and Wind, 115
Dynamic Simulation of the Maglev Vehicle/Guideway System, 120
Effect of Surrounding Traffic Characteristics on Lane Changing Behavior, 1894
Field Procedures for Real-World Measurements of Emissions from Diesel Construction Vehicles, 1186
Free and Secure Trade Commercial Vehicle Crossing Times at the Pacific Highway Port of Entry, 1889
Microsimulation Study of the Effect of Exclusive Bus Lanes on Heterogeneous Traffic Flow, 1922
Numerical/Experimental Correlation of a Plasma Wind Tunnel Test on a UHTC-Made Nose Cap of a Reentry Vehicle, 72

Operational Requirements for Long-Span Bridges under Strong Wind Events, 107
Planning for Commercial Vehicle Weight Limit Change: Application and Computer Software, 2129
Reset to Zero and Specify Active Safety Systems according to Real-World Needs, 1837
Signal Treatments to Reduce the Likelihood of Heavy Vehicle Crashes at Intersections: Microsimulation Modeling Approach, 1856
Simulation-Based Assessment of Vehicle Safety Behavior under Hazardous Driving Conditions, 1822

Velocity
Application of Riprap and Collar to Prevent Scouring around Rectangular Bridge Piers, 962
Characteristics of Rubber-Sand Particle Mixtures according to Size Ratio, 1376
Chute Aerators. I: Air Transport Characteristics, 980
Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039
Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268
Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036
Extended Fourth-Order Depth-Integrated Model for Water Waves and Currents Generated by Submarine Landslides, 510
Field Measurements of Mean Velocity Characteristics of a Large-Diameter Swirling Jet, 1007
Flow Pattern for a Silo with Two Layers of Materials with Single or Double Openings, 899
Formulation of the Entropy Parameter Based on Hydraulic and Geometric Characteristics of River Cross Sections, 1141
Graphical Solutions for Hillslopes: Discharge, Head, and Velocity Diagrams, 1263
HSC with Expanded Perlite Aggregate at Wet and Dry Curing Conditions, 1486
Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition, 956
Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition
Mean Velocity of Mudflows and Debris Flows, 1012
Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054
Observations on Sand Jets in Air, 577
Penetration Length of Confined Counter Flowing Free Jets, 961
Penetration Type Field Velocity Probe for Soft Soils, 792
Preimpact Configuration Analysis of Dual-Arm Space Manipulator Capturing Object, 52
Residual Mechanical Properties of High-Strength Concretes after Exposure to Elevated Temperatures, 1346
Structural Characterization of Composite Structural Insulated Panels for Exterior Wall Applications, 223
Velocity Profile and Flow Resistance Models for Developing Chute Flow, 989
Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789

Velocity distribution
Depth-Averaged Shear Stress and Velocity in Open-Channel Flows, 1043
Effect of Vegetation on Banks on Distributions of Velocity and Reynolds Stress under Accelerating Flow, 1127
Gauging Rivers during All Seasons Using the Q2D Velocity Index Method, 963

Velocity profile
Wall Shear Stress in Transient Turbulent Pipe Flow by Local Velocity Measurement, 1016

Veneers
Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685

Ventilation
CFD Analysis of Turbulent Natural Ventilation in Double-Skin Façade: Thermal Mass and Energy Efficiency, 454
Effect of Diffuser Design on Thermal Comfort and Ventilation Efficiency, 2121
Nondeformability of Ventilated and Mortar-Embedded Marble Facade Panels, 1496
Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176

Verification
Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas. I, 9
Research Validation: Challenges and Opportunities in the Construction Domain, 327

Vibration
Analysis of Tall Buildings with Damped Outriggers, 1747
Analytical Approach for Detection of Multiple Cracks in a Beam, 493
Analytical Solution for Biot Flow–Induced Damping in Saturated Soil during Shear Wave Excitations, 919
Bending, Buckling, and Vibration of Micro/Nanobeams by Hybrid Nonlocal Beam Model, 516
Blast Limits for Transmission Structures. I: Response Spectra Development, 1500
Blast Limits for Transmission Structures. II: Structural Response and Blast Limit Development, 1501
Complex Frequencies in Elastodynamics, with Application to the Damping-Solvent Extraction Method, 522
Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708
Damage Identification in a Truss Tower by Regularized Model Updating, 1637
Damped Properties and Noether Symmetries of Damped Free Vibration, 2134
Damping Parameter Identification and Study of Metal Foam Filled Steel Tube, 1384
Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578
Dynamic Behavior of Stay Cables with Rotational Dampers, 528
Dynamic Compaction of Collapsible Soils Based on U.S. Case Histories, 890
Effect of Bracing on Linear Free Vibration Characteristics of Thin-Walled Beams with Open Cross Section, 487

Effect of Construction Induced Vibrations on Green Concrete in Drilled Shafts, 1412

Effect of Hanger Flexibility on Dynamic Response of Suspension Bridges, 602

Evaluation of Vibration Assessment Criteria and Their Application to Stadium Serviceability, 1505

Experimental Investigation of Bending Fatigue Response of Grouted Stay Cables, 106

Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477

Finite-Element Analysis and Vibration Testing of a Two-Span Masonry Arch Bridge, 1499

Forced Vertical Vibration of Rigid Circular Disc on a Transversely Isotropic Half-Space, 548

Free Vibration Analysis of Cylindrical Shells Supported on Parts of the Edges, 42

Handling the Temperature Effect in Vibration Monitoring: Two Subspace-Based Analytical Approaches, 495

Improved Decentralized Method for Control of Building Structures under Seismic Excitation, 524

Influence of Rocking Motion on Vibratory Roller-Based Measurement of Soil Stiffness, 546

Investigation of Turbulence Effects on Torsional Divergence of Long-Span Bridges by Using Dynamic Finite-Element Method, 155

Is Construction Blasting Still Abnormally Dangerous?, 1311

Load Vectors for Damage Location in Systems Identified from Operational Loads, 462

Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510

Modeling Spatially Unrestricted Pedestrian Traffic on Footbridges, 1735

Modified Cross-Correlation Method for the Blind Identification of Structures, 545

Modular High-Force Seismic Magneto-Rheological Fluid Damper, 1619

Natural Vibrations of Open-Variable Thickness Circular Cylindrical Shells in High Temperature Field, 62

New Dynamic Participation Factor for Turbine-Generator Foundations, 2135

Nonlinear Dynamic Response of Piles under Horizontal Excitation, 929

Optimal Tuning of Amplitude Proportional Coulomb Friction Damper for Maximum Cable Damping, 1618

Reconstruction Method for Damage Detection in Beams Based on Natural Frequency and Antiresonant Frequency Measurements, 492

Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572

Road Roughness and Whole Body Vibration: Evaluation Tools and Comfort Limits, 1876

Stochastic Free Vibration Response of Soft Core Sandwich Plates Using an Improved Higher-Order Zigzag Theory, 40

Structural Reliability Estimation with Vibration-Based Identified Parameters, 469

Vertical Vibrations of a Rigid Foundation Embedded in a Poroelastic Half Space, 497

Vibration Analysis of an Elastic Beam Subjected to a Moving Beam with Flexible Connections, 471

Vibration Performance of Lightweight Cold-Formed Steel Floors, 1671

Vibration Serviceability of a Building Floor Structure. I: Dynamic Testing and Computer Modeling, 1546

Vibration Serviceability of a Building Floor Structure. II: Vibration Evaluation and Assessment, 1547

Wind-Induced Response Characteristics of Monolayer Cable Net, 490

Vietnam

Factors Affecting Construction Project Outcomes: Case Study of Vietnam, 1596

Political, Economic, and Legal Risks Faced in International Projects: Case Study of Vietnam, 1597

Virginia

Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053

Modeling Unsteady Flow Characteristics of Hydropeaking Operations and Their Implications on Fish Habitat, 1052

Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623

Stochastic Dilemma Hazard Model at High-Speed Signalized Intersections, 1835

Viruses

Variability of *Escherichia coli* Concentrations in an Urban Watershed in Texas, 762

Viscoelasticity

Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509

Case Studies of Leak Detection and Location in Water Pipe Systems by Inverse Transient Analysis, 1984

Characterization of the Tensile Viscoelastic Properties of an Undamaged Asphalt Mixture, 1808

Compressive Creep of Virgin HDPE Using Equivalent Strain Energy Density Method, 1488

Determination of Shear and Bulk Moduli of Viscoelastic Solids from the Indirect Tension Creep Test, 565

Dynamic Response Solution in Transient State of Viscoelastic Road under Moving Load and Its Application, 475

Effectiveness of Viscoelastic Models for Prediction of Tensile Axial Strains during Cyclic Loading of High-Density Polyethylene Pipe, 1570

Linear Viscoelastic Modeling for Hot-Poured Crack Sealants at Low Temperature, 1454

Modified Schapery's Model for Asphalt Sand, 503

New Parameter to Evaluate Moisture Damage of Asphalt-Aggregate Bond in Using Dynamic Shear Rheometer, 1370

Parameter Identification Procedure for Heterogeneous Viscoelastic Composites Using Iterative Functions, 541

Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410

Thermoviscoelastic Analysis and Creep Testing of Ambient Temperature Cure Epoxies Used in Adhesive Anchor Applications, 1460

Viscoplasticity

Design Charts for Evaluating Impact Forces on Dissipative Granular Soil Cushions, 922

Numerical Simulation of Viscoelastoplastic Land Subsidence due to Groundwater Overdrafting in Shanghai, China, 1079

Viscosity

Influence of Antistripping Additives on Moisture Susceptibility of Warm Mix Asphalt Mixtures, 1461

Optimization of Cement Grouts Containing Silica Fume and Viscosity Modifying Admixture, 1377

Ranking Binder Creep Performance Using the ARRB Elastometer, 1391

Time-Dependent Behavior of Laminated Glass, 1383

Voids

Inspection and Condition Assessment Using Ground Penetrating Radar, 793

Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451

Volcanic ash

Fresh, Mechanical, and Durability Characteristics of Self-Consolidating Concrete Incorporating Volcanic Ash, 1414

Geomechanical Characterization of the Volcaniclastic Material Involved in the 2002 Landslides at Stromboli, 811

Volume change

Addressing Sulfate-Induced Heave in Lime Treated Soils, 784

Volunteers

Building Community Disaster Preparedness with Volunteers: Community Emergency Response Teams in Illinois, 2090

Vortices

Characteristics of Monami Wave in Submerged Vegetated Flow, 1073

Experimental Investigation of a Vortex-Flow Restrictor: Rain-Blocker Performance Tests, 998

Linear Instability Theory for Frequency Assessment of Coherent Vortices in Submerged and Aside Rigid Canopies, 1157

Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531

Walkways

Lessons Learned from a Design Competition for Structural Engineering Students: The Case of a Pedestrian Walkway at the Université de Sherbrooke, 1587

Putting Cities Back on Their Feet, 1942

Willingness to Shift to Walking or Bicycling to Access Suburban Rail: Case Study of Mumbai, India, 1917

Walls

Application of a SOM-Based Optimization Algorithm in Minimizing Construction Time for Secant Pile Wall, 432

Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502

Dynamic Response of Retrofitted Masonry Walls for Blast Loading, 542

Experimental Analysis of Reinforced Concrete Block Masonry Walls Subjected to In-Plane Cyclic Loading, 1653

FRP-Retrofitted URM Walls under In-Plane Shear: Review and Assessment of Available Models, 249

Full-Scale Impact Test of Four Traffic Barriers on Top of an Instrumented MSE Wall, 815

Innovative ANN Technique for Predicting Failure/Cracking Load of Masonry Wall Panel under Lateral Load, 296

In-Plane Behavior of Clay Masonry Walls: Experimental Testing and Finite-Element Modeling, 1742

In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. I: Experimental Investigation, 250

Lateral Out-of-Plane Strengthening of Masonry Walls with Composite Materials, 214

Lateral Seismic Performance of Multipanel Precast Hollowcore Walls, 1686

Nondestructive Testing Evaluation of Drying Process in Flooded Full-Scale Masonry Walls, 1544

Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852

Out-of-Plane Flexural Performance of GFRP-Reinforced Masonry Walls, 192

Semiempirical Approach for Estimation of DDC-Induced Deflections of Sheet Pile Walls in Peat, 1504

Shaking Table Model Tests on Pile Groups behind Quay Walls Subjected to Lateral Spreading, 820

Static and Cyclic Out-of-Plane Response of Masonry Walls Strengthened Using Textile-Mortar System, 1475

Tests on Seismically Damaged Reinforced Concrete Structural Walls Repaired Using Fiber-Reinforced Polymers, 236

Unreinforced Concrete Masonry Walls Strengthened with CFRP Sheets and Strips under Pendulum Impact, 252

Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871

Wall Shear Stress in Transient Turbulent Pipe Flow by Local Velocity Measurement, 1016

Warranties

Determinants of Industry Acceptance for Highway Warranty Contracts: Alabama Case Study, 1172

Washington

Design and Performance of a 46-m-High MSE Wall, 851

Empirical Modeling of Pavement Overlay Crack Progression with Field Data, 1193

Shear-Wave Velocity Correlations for Puyallup River Alluvium, 901

Tsunami Preparedness on the Oregon and Washington Coast: Recommendations for Research, 2085

An Urban Approach to LID, 2208

Washington State's I-405 Project: Women in Industry Leadership, 2073

Waste digestion

Giving It Juice, 2212

Treatment of Arsenic-Laden Water Plant Sludge by Anaerobic Digestion, 2108

Waste disposal

Aluminum Reactions and Problems in Municipal Solid Waste Landfills, 2126

Waste management

Design Framework for Electrokinetically Enhanced Dewatering of Sludge, 659

Disposal of Arsenic-Laden Adsorptive Media: Economic Analysis for California, 730

Dual-Interval Fuzzy Stochastic Programming Method for Long-Term Planning of Municipal Solid Waste Management, 279

Durability and Environmental Performance of Alkali-Activated Tungsten Mine Waste Mud Mortars, 1444

Effect of Forced Aeration and Mechanical Turning on Leachate Quantity and Quality from Glass Cullet Stockpiles, 708

Effect of Mixing Constituent toward Engineering Properties of POFA Cement-Based Aerated Concrete, 1372

Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691

Evaluating the Mobility of Arsenic in Synthetic Iron-Containing Solids Using a Modified Sequential Extraction Method, 635

Geotechnical Characterization Field Measurement, and Laboratory Testing of Municipal Solid Waste, 2248

Integrated Fuzzy Ranking Analysis for Assessing the Quality of Composting Products, 670

Life-Cycle Assessment of Waste Management Greenhouse Gas Emissions Using Municipal Waste Combustor Data, 697

Methodology for Estimating Optimum Reuse Time Span: Application to Reusable Computer Waste, 2114

Model to Quantify Removal and Inactivation of Microorganisms Occluded in Effluent Wastewater Particles Using Filtration and Disinfection Systems, 739

Reuse of Fruit Waste as Biopolymeric Flocculant and Optimizing Turbidity Reduction: Comparison Study with Industrial Flocculant, 752

Rheological Characterization of Sludges during Belt Filtration Dewatering Using an Immobilization Cell, 721

Service Distance and Ratio-Based Location-Allocation Models for Siting Recycling Depots, 662

Textile Dye Removal in Single-Phase and Two-Phase Anaerobic Biotreatment Systems, 2125

Tire-Derived Steel for Hydrogen Sulfide Removal in Landfill Cover, 2118

Waste stabilization ponds

Modeling the Oxidation of Sulfide in Pulp and Paper Wastewaters, 741

Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174

Waste treatment

Bench-Scale Evaluation of Chemically Bonded Phosphate Ceramic Technology to Stabilize Mercury Waste Mixtures, 639

Biosorptive Color Removal: Applicability of Equilibrium Isotherm Models, 2098

Contaminant Leaching from Stabilized/Solidified Acid Tars, 764

Degradation of Chlorobenzene in Water Using Nanoscale Cu Coupled with Microwave Irradiation, 658

Experimental Validation of the Static Granular Bed Reactor for Industrial Waste Anaerobic Treatment, 737

Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614

Improved Passive Treatment of Acid Mine Drainage in Mushroom Compost Amended with Crab-Shell Chitin, 683

Model to Quantify Removal and Inactivation of Microorganisms Occluded in Effluent Wastewater Particles Using Filtration and Disinfection Systems, 739

Removal of Heavy Metal Ions by Waste Biomass of *Saccharomyces Cerevisiae*, 619

Removal of Trichlorobenzene from Flue Gas Using Complex Absorbent, 767

Wasteload allocation

Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171

Wastewater management

Aerobic Methane Oxidation Coupled to Denitrification: Kinetics and Effect of Oxygen Supply, 632

Application of Natural Clayey Soil as Adsorbent for the Removal of Copper from Wastewater, 769

Application of Two-Directional Time Series Models to Replace Missing Data, 661

Asset Management for Urban Wastewater Pipeline Networks, 1174

Benthal Solids Properties Influencing ASB Design and Operating Practices, 633

Biological and Abiotic Color Reduction of Paper Mill Effluents during Anaerobic Composting, 692

Calibration of Reactive Transport Models for Remediation of Mine Drainage in Solid-Substrate Biocolumns, 714

Contribution of the Estrogen-Degrading Bacterium *Novosphingobium* sp. Strain JEM-1 to Estrogen Removal in Wastewater Treatment, 711

Development of a Kinetic Model for the Biosorption of Cationic Dyes by Dead Macrofungi, 667

Development of a Novel Internal Electrolysis System by Iron Connected with Carbon: Treatment of Nitroaromatic Compounds and Case of Engineering Application, 719

Dual Discharge Approach to Accessing Assimilative Capacity: Probabilistic Analysis and Management Application, 688

Effect of Carbon Source on Biological Nitrogen and Phosphorus Removal in an Anaerobic-Anoxic-Oxic (A^2O) Process, 749

Environmental Biotechnology in Water and Wastewater Treatment, 650

Evaluation of Electric Arc Furnace Slag as a Potential Phosphate-Removal Substrate, 649

Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123

Feasibility of Using Coal Fly Ash for Mine Waste Containment, 690

First Public-Private-Partnership Application in Taiwan's Wastewater Treatment Sector: Case Study of the Nanzih BOT Wastewater Treatment Project, 406

Headworks and Headway, 2161

Hydrodynamics of Secondary Settling Tanks and Increasing Their Performance Using Baffles, 612

Industrial Plant for Olive Mill Wastewater from Two-Phase Treatment by Chemical Oxidation, 757

Insight into Nitrous Oxide Emissions from Biological Wastewater Treatment and Biosolids Disposal, 2112

Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016

Kinetics of SO_2 Absorption with Fly Ash Slurry with Concomitant Production of a Useful Wastewater Coagulant, 645

Luminol-Based Enhanced Chemiluminescence Assay for Quantification of Peroxidase and Hydrogen Peroxide in Aqueous Solutions: Effect of Reagent pH and Ionic Strength, 738

Microwave-Enhanced Thermal Desorption of Polyhalogenated Biphenyls from Contaminated Soil, 643

Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas. I, 9

Modeling the Relationship between Capillary Suction Time and Specific Resistance to Filtration, 720

Modeling VOC Emissions in the High-Purity Oxygen Activated Sludge Process, 743

Optimal Distribution and Control of Storage Tank to Mitigate the Impact of New Developments on Receiving Water Quality, 648

Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994

Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222

Photocatalytic Degradation of Orange II in Aqueous Iron-Rich Montmorillonite Solutions, 626

Photoreduction of Reactive Brilliant Red X-3B by Ultraviolet Irradiation/Potassium Borohydride/Sodium Bisulfite, 758

Practical Melting Forecasting of Artificial Snow Made from Treated Wastewater, 173

Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174

Simultaneous Organic and Nutrient Removal in a Naturally Ventilated Biotower Treating Presettled Municipal Wastewater, 644

Sorption of Statin Pharmaceuticals to Wastewater-Treatment Biosolids, Terrestrial Soils, and Freshwater Sediment, 638

SSPRSD Using a Filamentous Fungal Strain *Penicillium expansum BS30* Isolated from Wastewater Sludge, 694

Sustainable Wastewater Management in Developing Countries, 2286

Swine Wastewater Treatment Using Submerged Biofilm SBR Process: Enhancement of Performance by Internal Circulation through Sand Filter, 679

Treatment of Arsenic-Laden Water Plant Sludge by Anaerobic Digestion, 2108

Treatment of Drilling Wastewater by Combined Coagulation-Ultraviolet/Fenton-Pressurized Biological Processes, 641

Treatment of Mixture of Sewage and Partially Treated Swine Wastewater by a Combination of UASB and Constructed Wetlands, 2122

Use of Ozone-Photocatalytic Oxidation (O_3/UV/TiO_2) and Biological Remediation for Treatment of Produced Water from Petroleum Refineries, 613

Watershed-Scale Impacts of Nitrogen from On-Site Wastewater Systems: Parameter Sensitivity and Model Calibration, 715

Water

Catalytic Decomposition of CFC-12 over Solid Super Acid Mo_2O_3/ZrO_2, 770

Effects of Bulk Water Chemistry on Autogenous Healing of Concrete, 1398

Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials, 1407

Influence of Water on the Compression Behavior of Decomposed Granite Soil, 842

Removal of Metal Ions from Storm-Water Runoff by Low-Cost Sorbents: Batch and Column Studies, 734

Water balance

Basin-Scale Water Resources Assessment in Oklahoma under Synthetic Climate Change Scenarios Using a Fully Distributed Hydrologic Model, 1068

Energy Audit of Water Networks, 2027

Estimation of Evapotranspiration from Bioretention Areas Using Weighing Lysimeters, 1108

Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills, 1064

Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills

Performance Evaluation and Uncertainty Measurement in Irrigation Scheduling Soil Water-Balance Approach, 1280

Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Water circulation

Model of Nearshore Waves and Wave-Induced Currents around a Detached Breakwater, 2044

Transport Characteristics in a 3D Groundwater Circulation Flow Field by Experimental and Numerical Investigations, 2115

Water content

Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003

Correspondence between the Campbell and van Genuchten Soil-Water-Retention Models, 1262

Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691

Influence of Fly Ash on Unconfined Compressive Strength of Cement-Admixed Clay at High Water Content, 1345

Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449

Physical Characterization of Municipal Solid Waste for Geotechnical Purposes, 895

Water demand

Comparison of Multivariate Regression and Artificial Neural Networks for Peak Urban Water-Demand Forecasting: Evaluation of Different ANN Learning Algorithms, 1130

Filtering Bad Measurement Data for Water Distribution System Demand Estimation, 2010

Interbasin Water Transfer: Economic Water Quality-Based Model, 1209

Long-Term Operation of Irrigation Dams Considering Variable Demands: Case Study of Zayandeh-rud Reservoir, Iran, 1234

Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224

Performance of Combined Double Seasonal Univariate Time Series Models for Forecasting Water Demand, 1078

Residential Water Demand under Alternative Rate Structures: Simulation Approach, 1999

Seasonal Residential Water Demand Forecasting for Census Tracts, 1961

Simulating Residential Water Demand with a Stochastic End-Use Model, 1960

Water discharge

Deposition from Particle-Laden, Plane, Turbulent, Buoyant Jets, 5

Design Framework for Electrokinetically Enhanced Dewatering of Sludge, 659
Discharge Estimation in a Tidal River with Partially Reverse Flow, 2053
Discharge Formulas for Subsurface Drainage of Retention Pond, 1223
Fuzzy Nonlinear Regression Approach to Stage-Discharge Analyses: Case Study, 1060
Hydraulic and Sedimentological Characterizations of a Reach on the Anaktuvuk River, Alaska, 1040
Hydraulic Relations for Clinging Flow of Sharp-Crested Weir, 984
Investigation of Flow through Orifices in Riser Pipes, 1238
Smear Effect and Well Resistance of PVD-Installed Ground Based on the Hyperbolic Method, 836
Water Use Intensities and the Composition of Production in Canada, 1965

Water distribution systems

AC Pipe in North America: Inventory, Breakage, and Working Environments, 1581
Accounting for Greenhouse Gas Emissions in Multiobjective Genetic Algorithm Optimization of Water Distribution Systems, 1974
Artificial Neural Network Model for Cost Estimation: City of Edmonton's Water and Sewer Installation Services, 388
Assessing Pressure Changes in an On-Demand Water Distribution System on Drip Irrigation Performance—Case Study in Italy, 1229
Backward Probabilistic Modeling to Identify Contaminant Sources in Water Distribution Systems, 2018
Calibration and Optimization of the Pumping and Disinfection of a Real Water Supply System, 2008
Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988
Considering Actual Pipe Connections in Water Distribution Network Analysis, 1035
Design of Pumped Water Distribution Networks with Storage, 1971
Development and Verification of an Online Artificial Intelligence System for Detection of Bursts and Other Abnormal Flows, 1990
Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095
Energy Audit of Water Networks, 2027
Extreme Impact Contamination Events Sampling for Water Distribution Systems Security, 1966
Field Studies of Discoloration in Water Distribution Systems: Model Verification and Practical Implications, 618
Filtering Bad Measurement Data for Water Distribution System Demand Estimation, 2010
Hierarchical Fuzzy Expert System for Risk of Failure of Water Mains, 1567
Integrating Location Models with Bayesian Analysis to Inform Decision Making, 1980
Irrigation Distribution Networks' Vulnerability to Climate Change, 1253
Least-Cost Design of Water Distribution Networks Including Fire Damages, 2026
Life-Cycle Perspective on Residential Water Conservation Strategies, 1166
Linear Algebra and Minimum Relative Entropy to Investigate Contamination Events in Drinking Water Systems, 2007
Monitoring Design for Source Identification in Water Distribution Systems, 2024
Multiobjective Optimization for Water Distribution System Design Using a Hyperheuristic, 2019
Multiobjective Optimization of Operational Responses for Contaminant Flushing in Water Distribution Networks, 1963
Neutral Search Technique for Short-Term Pump Schedule Optimization, 1972
Optimal Design of Sensor Placement in Water Distribution Networks, 1959
Optimal Meter Placement for Water Distribution System State Estimation, 1993
Optimal Operation of Complex Water Distribution Systems Using Metamodels, 2002
Optimal Water Distribution Network Design with Honey-Bee Mating Optimization, 273
Optimization of Water Distribution Network Design Using Differential Evolution, 1987
Planning Unidirectional Flushing Operations as a Response to Drinking Water Distribution System Contamination, 2025
Pressure-Dependent Leak Detection Model and Its Application to a District Water System, 1970
Probabilistic Analysis of Transient Design for Water Supply Systems, 2028
Quality Modeling of Water Distribution Systems Using Sensitivity Equations, 944
Real-Time Identification of Possible Contamination Sources Using Network Backtracking Methods, 2003
Real-Time Optimal Valve Operation and Booster Disinfection for Water Quality in Water Distribution Systems, 2005
Review of Sensor Placement Strategies for Contamination Warning Systems in Drinking Water Distribution Systems, 2021
Risk-Based Sensor Placement for Contaminant Detection in Water Distribution Systems, 2023
Robust Design of Water Distribution Networks for a Proactive Risk Management, 1982
RTC of Valves for Leakage Reduction in Water Supply Networks, 1973
Scheduling Renewal of Water Pipes While Considering Adjacency of Infrastructure Works and Economies of Scale, 2011
Simplified Numerical and Analytical Approach for Solutes in Turbulent Flow Reacting with Smooth Pipe Walls, 1005
Single-Objective versus Multiobjective Optimization of Water Distribution Systems Accounting for Greenhouse Gas Emissions by Carbon Pricing, 2015
SLOTS: Effective Algorithm for Sensor Placement in Water Distribution Systems, 2022

Water flow

Assessing Pressure Changes in an On-Demand Water Distribution System on Drip Irrigation Performance—Case Study in Italy, 1229
Block Ramp Design for Efficient Energy Dissipation, 446
Bridge Pier Scour under Flood Waves, 1031
Discharge Coefficient for a Water Flow through a Bottom Orifice of a Conical Hopper, 1264
Exact Sensitivity Equation for One-Dimensional Steady-State Shallow Water Flow (Application to Model Calibration), 1150

Experimental Study on Selective Withdrawal in a Two-Layer Reservoir Using a Temperature-Control Curtain, 967

Experimental Study on the Multisegment Regime of the Water Flow in Drip Emitters, 1228

Flow over Gabion Weirs, 1265

Hydrospatial Approach to Assist Decision Making on Reservoir Protection Zones, 1087

Numerical Simulation of Shallow-Water Flow Using a Modified Cartesian Cut-Cell Approach, 498

Rating Curves for Dam-Break Flows, 1061

Water levels

Comparative Study of SVMs and ANNs in Aquifer Water Level Prediction, 299

Downstream-Water-Level Control Test Results on the WM Lateral Canal, 1250

Groundwater Level Prediction Using SOM-RBFN Multisite Model, 1117

Laboratory Experiments on the Failure of Coarse Homogeneous Sediment Natural Dams on a Sloping Bed, 1033

Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida, 1976

Passive Restraint System for Floating Docks with Large Water-Level Excursions, 2159

Water loss

Modeling Evaporative Water Loss from the On-Farm Reservoir with Biological Shading, 1111

Pressure-Dependent Leak Detection Model and Its Application to a District Water System, 1970

Water management

Applying Multiobjective Genetic Algorithm to Analyze the Conflict among Different Water Use Sectors during Drought Period, 2013

Development and Verification of an Online Artificial Intelligence System for Detection of Bursts and Other Abnormal Flows, 1990

Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975

Evaluating Watershed Management within a River Basin Context Using an Integrated Indicator System, 1985

Impacts and Uncertainty of Climate Change on Water Resource Management of the Peribonka River System (Canada), 1997

Improved Method to Calculate a Water Poverty Index at Local Scale, 754

Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016

Low Impact Development 2010, 2262

Modeling Controlled Water Systems, 1244

Multiobjective Allocation of Transboundary Water Resources: Case of the Euphrates and Tigris, 1968

Preserving Our Water Resources, 2162

Removal of Metal Ions from Storm-Water Runoff by Low-Cost Sorbents: Batch and Column Studies, 734

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978

State of the Art for Genetic Algorithms and Beyond in Water Resources Planning and Management, 2001

TMDLs in the Urban Environment, 2288

World Environmental and Water Resources Congress 2010, 2296

Water meters

Optimal Meter Placement for Water Distribution System State Estimation, 1993

Water pipelines

AC Pipe in North America: Inventory, Breakage, and Working Environments, 1581

Asset Management for Urban Wastewater Pipeline Networks, 1174

Automated Detection and Location of Leaks in Water Mains Using Infrared Photography, 1519

Case Studies of Leak Detection and Location in Water Pipe Systems by Inverse Transient Analysis, 1984

Considering Actual Pipe Connections in Water Distribution Network Analysis, 1035

Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

Markov and Neural Network Models for Prediction of Structural Deterioration of Storm-Water Pipe Assets, 1180

Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994

Pinning Force during Closure Process at Blocked Pipe Entrance, 1215

Trenchless Renewal of Culverts and Storm Sewers, 2291

Water policy

Improved Method to Calculate a Water Poverty Index at Local Scale, 754

Water pollution

Adsorption Mechanism of Arsenate on Crystal γ-Fe_2O_3 Nanoparticles, 712

Adsorption of As(V) from Water Using Nanomagnetite, 656

Backward Probabilistic Modeling to Identify Contaminant Sources in Water Distribution Systems, 2018

Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

Design Aid for Water Quality Detention Basins, 1059

Estuarine and Coastal Modeling, 2241

Evaluating Urban Pollutant Buildup/Wash-Off Models Using a Madison, Wisconsin Catchment, 630

Evaluating Watershed Management within a River Basin Context Using an Integrated Indicator System, 1985

Frequency Methodology for Evaluating Urban and Highway Storm-Water Quality Control Infiltration BMPs, 1983

Guideline for Monitoring Stormwater Gross Solids, 2252

Kaolinite and Lead in Saturated Porous Media: Facilitated and Impeded Transport, 756

Linear Algebra and Minimum Relative Entropy to Investigate Contamination Events in Drinking Water Systems, 2007

Metal Contamination Characteristics of *Lepidium sativum* in a Phosphate-, Saline-, and Nitrate-Contaminated Media, 751

Modeling Water Table Mounding and Contaminant Transport beneath Storm-Water Infiltration Basins, 1152

Multiobjective Optimization of Operational Responses for Contaminant Flushing in Water Distribution Networks, 1963

Penetration Length of Confined Counter Flowing Free Jets, 961

Planning Unidirectional Flushing Operations as a Response to Drinking Water Distribution System Contamination, 2025

Real-Time Identification of Possible Contamination Sources Using Network Backtracking Methods, 2003

Review of Sensor Placement Strategies for Contamination Warning Systems in Drinking Water Distribution Systems, 2021

Risk-Based Sensor Placement for Contaminant Detection in Water Distribution Systems, 2023

Simulating the Effect of Sulfate Addition on Methylmercury Output from a Wetland, 651

SLOTS: Effective Algorithm for Sensor Placement in Water Distribution Systems, 2022

TMDLs in the Urban Environment, 2288

Water pressure

Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905

RTC of Valves for Leakage Reduction in Water Supply Networks, 1973

Water quality

Application of Hilbert-Huang Transform Method for Analyzing Toxic Concentrations in the Niagara River, 1066

Calibration and Optimization of the Pumping and Disinfection of a Real Water Supply System, 2008

Characterizing Physicochemical Quality of Storm-Water Runoff from an Urban Area in Calgary, Alberta, 745

Comparison of Spatial Interpolation Methods for Water Quality Evaluation in the Chesapeake Bay, 627

Comparison of the Monod and Droop Methods for Dynamic Water Quality Simulations, 723

Design Aid for Water Quality Detention Basins, 1059

Discharge Formulas for Subsurface Drainage of Retention Pond, 1223

Dual Discharge Approach to Accessing Assimilative Capacity: Probabilistic Analysis and Management Application, 688

Effect of Forced Aeration and Mechanical Turning on Leachate Quantity and Quality from Glass Cullet Stockpiles, 708

Effectiveness of Source-Zone Remediation of DNAPL-Contaminated Subsurface Systems, 663

Enhanced Estimation of Terrestrial Loadings for TMDLs: Normalization Approach, 1995

Establishing Storm-Water BMP Evaluation Metrics Based upon Ambient Water Quality Associated with Benthic Macroinvertebrate Populations, 673

Evaluation of the Biocriteria of Streams in the San Diego Hydrologic Region, 684

Experimental Study on Selective Withdrawal in a Two-Layer Reservoir Using a Temperature-Control Curtain, 967

Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746

Hydrologic and Water Quality Aspects of Using a Compost/Mulch Blend for Erosion Control, 1272

Hydrologic and Water Quality Integration Tool: HydroWAMIT, 11

Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096

Interbasin Water Transfer: Economic Water Quality-Based Model, 1209

Joint Water Quantity-Quality Management in a Biofuel Production Area—Integrated Economic-Hydrologic Modeling Analysis, 2009

Linear Algebra and Minimum Relative Entropy to Investigate Contamination Events in Drinking Water Systems, 2007

Linking Pathogen Sources to Water Quality in Small Urban Streams, 637

Long-Term Simulation of a System for Catchment, Pretreatment, and Treatment of Polluted Runoff Water, 773

Low Impact Development 2010, 2262

Methodology for Bayesian Belief Network Development to Facilitate Compliance with Water Quality Regulations, 1168

Multiobjective Water Quality Model Calibration Using a Hybrid Genetic Algorithm and Neural Network–Based Approach, 724

New Insights into the Quality of Urban Storm Water in South Eastern Australia, 654

Optimal Distribution and Control of Storage Tank to Mitigate the Impact of New Developments on Receiving Water Quality, 648

Optimal Operation of Complex Water Distribution Systems Using Metamodels, 2002

Parsimonious Model for Combined Sewer Overflow Pollution, 646

Phosphorus Budget and Remediation Plan for Big Platte Lake, Michigan, 2017

Probability of Failure Analysis due to Internal Corrosion in Cast-Iron Pipes, 1170

Promoting Sustainability through Transportation Infrastructure? Innovation and Inertia in the Kansas City Metropolitan Area, 1950

Quality Modeling of Water Distribution Systems Using Sensitivity Equations, 944

Real-Time Optimal Valve Operation and Booster Disinfection for Water Quality in Water Distribution Systems, 2005

Release and Removal of Microcystins from *Microcystis* during Oxidative-, Physical-, and UV-Based Disinfection, 609

Reliability-Constrained Optimization of Water Treatment Plant Design Using Genetic Algorithm, 647

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

Robust Multivariate Outlier Detection Methods for Environmental Data, 755

Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623

Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617

Simplified Numerical and Analytical Approach for Solutes in Turbulent Flow Reacting with Smooth Pipe Walls, 1005

Simulating Residential Water Demand with a Stochastic End-Use Model, 1960

Simulating the Effect of Sulfate Addition on Methylmercury Output from a Wetland, 651

TMDLs in the Urban Environment, 2288

Transport and Distribution of Particulate Matter Phosphorus Fractions in Rainfall-Runoff from Roadway Source Areas, 744

Treatment of Mixture of Sewage and Partially Treated Swine Wastewater by a Combination of UASB and Constructed Wetlands, 2122

Variability of *Escherichia coli* Concentrations in an Urban Watershed in Texas, 762

Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171

Water Quality Modeling of a Hypoxic Stream, 2107

Water reclamation

Design Robustness of Local Water-Recycling Schemes, 2012

Effects of Primary Substrate Concentration on NDMA Transport during Simulated Aquifer Recharge, 652

Energy Variability and Produced Water: Two Challenges, One Synergistic Management Approach Using Pumped Hydroelectric Energy Storage, 447

Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222

Pilot-Scale Evaluation of Chemical Cleaning Protocols for Organic and Biologically Fouled Microfiltration Membranes, 674

Water Use Intensities and the Composition of Production in Canada, 1965

Water resources

Basin-Scale Water Resources Assessment in Oklahoma under Synthetic Climate Change Scenarios Using a Fully Distributed Hydrologic Model, 1068

Comparison of Multivariate Regression and Artificial Neural Networks for Peak Urban Water-Demand Forecasting: Evaluation of Different ANN Learning Algorithms, 1130

Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975

Impacts and Uncertainty of Climate Change on Water Resource Management of the Peribonka River System (Canada), 1997

Integrated Water Resource Management for Kaoping River Basin, 2111

Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138

Modeling Conjunctive Use Operations and Farm Decisions with Two-Stage Stochastic Quadratic Programming, 1998

Modeling Evaporative Water Loss from the On-Farm Reservoir with Biological Shading, 1111

Modified Horton's Equation to Model Advance Trajectory in Furrow Irrigation Systems, 1227

Multiobjective Allocation of Transboundary Water Resources: Case of the Euphrates and Tigris, 1968

Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989

Optimal Spacing in an Array of Fully Penetrating Ditches for Subsurface Drainage, 1206

Performance of Penman-Monteith FAO56 in a Semiarid Highland Environment, 1282

Pipe Routing through Ant Colony Optimization, 1178

Preserving Our Water Resources, 2162

Relative Comparison of the Local Recalibration of the Temperature-Based Evapotranspiration Equation for the Korea Peninsula, 1266

Soil Moisture Profile Development from Surface Observations by Principle of Maximum Entropy, 1089

State of the Art for Genetic Algorithms and Beyond in Water Resources Planning and Management, 2001

World Environmental and Water Resources Congress 2010, 2296

Water rights

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977

River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978

Water shortage

Factors Affecting Participation in Spot and Options Markets for Water, 2004

Farmers' Adaptation and Regional Land-Use Changes in Irrigation Systems under Fluctuating Water Supply, South India, 1267

Improved Method to Calculate a Water Poverty Index at Local Scale, 754

Water storage

Approach Using Active Groundwater Storage for Hydrologic Model Calibration in West-Central Florida, 1205

Design of Pumped Water Distribution Networks with Storage, 1971

Flood Forecasting in Regulated Basins Using the Ensemble Extended Kalman Filter with the Storage Function Method, 1158

General Model to Represent Multiple Wetland and Lake Stage-Storage Behavior, 1134

Incorporating Surface Storage and Slope to Estimate Clark Unit Hydrographs for Ungauged Indiana Watersheds, 1148

Unsteady Solution for Well Recharge in a Low Diffusive Aquifer, 1293

Using a Distributed Hydrologic Model to Evaluate the Location of Urban Development and Flood Control Storage, 2020

Water supply

Addressing Sustainability in Benchmarking Framework for Indian Urban Water Utilities, 1171

Celebrating Hoover Dam: Mission of Boulder Dam Fulfilled, 2218

Celebrating Hoover Dam: Significance of Boulder Canyon Project, 2217

Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988

Farmers' Adaptation and Regional Land-Use Changes in Irrigation Systems under Fluctuating Water Supply, South India, 1267

Impact of Irrigation Management Transfer on Land and Water Productivity and Water Supply in the Gediz Basin, Turkey, 1233

Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016

Long-Lead Water Supply Forecast Using Large-Scale Climate Predictors and Independent Component Analysis, 1131

Optimal Water Distribution Network Design with Honey-Bee Mating Optimization, 273

Optimization of Water Distribution Network Design Using Differential Evolution, 1987

Probabilistic Analysis of Transient Design for Water Supply Systems, 2028

Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Water surface profiles

Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida, 1976

Water table

Analytical Study of Water Table Fluctuation in Unconfined Aquifers due to Varying Bed Slopes and Spatial Location of the Recharge Basin, 1147

Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924

Graphical Solutions for Hillslopes: Discharge, Head, and Velocity Diagrams, 1263

Impacts of Unsaturated Zone Soil Moisture and Groundwater Table on Slope Instability, 914

Modeling Evapotranspiration of Two Land Covers Using Integrated Hydrologic Model, 1256

Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232

Water Table Fluctuation in the Presence of a Time-Varying Exponential Recharge and Depth-Dependent ET in a Two-Dimensional Aquifer System with an Inclined Base, 1255

Water tanks

Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size, 771

Water temperature

Effect of Storm-Water Wetlands and Wet Ponds on Runoff Temperature in Trout Sensitive Waters, 1273

Water transfer

Interbasin Water Transfer: Economic Water Quality-Based Model, 1209

Water treatment

Arsenic and Fluoride Removal Using Simple Materials, 655

Comparison of the Monod and Droop Methods for Dynamic Water Quality Simulations, 723

Dual Discharge Approach to Accessing Assimilative Capacity: Probabilistic Analysis and Management Application, 688

Environmental Biotechnology in Water and Wastewater Treatment, 650

Evaluation of Apparatus for Membrane Cleaning Tests, 740

Granular Activated Carbon Adsorption of 2-Methylisoborneol (MIB): Pilot- and Laboratory-Scale Evaluations, 718

Kaolinite and Lead in Saturated Porous Media: Facilitated and Impeded Transport, 756

Modeling Arsenite Adsorption on Rusting Metallic Iron, 657

Modeling Particle-Size Distribution Dynamics during Precipitative Softening, 610

Modeling TOC Breakthrough in Granular Activated Carbon Adsorbers, 631

Modeling Urban Storm-Water Quality Treatment: Model Development and Application to a Surface Sand Filter, 616

Natural Organic Matter Removal by Adsorption onto Carbonaceous Nanoparticles and Coagulation, 729

New Approach: Waste Materials as Sorbents for Arsenic Removal from Water, 753

Photoreduction of Reactive Brilliant Red X-3B by Ultraviolet Irradiation/Potassium Borohydride/Sodium Bisulfite, 758

Pilot-Scale Evaluation of Chemical Cleaning Protocols for Organic and Biologically Fouled Microfiltration Membranes, 674

Release and Removal of Microcystins from *Microcystis* during Oxidative-, Physical-, and UV-Based Disinfection, 609

Removal of TDS from Cooling Tower Water by Using EDTA-Modified Bagasse Fibers, 680

Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size, 771

Sorption of Cr (VI) onto Olive Stone in a Packed Bed Column: Prediction of Kinetic Parameters and Breakthrough Curves, 766

Use of Ozone-Photocatalytic Oxidation (O_3/UV/TiO_2) and Biological Remediation for Treatment of Produced Water from Petroleum Refineries, 613

Valuing Drinking Water Provision as an Ecosystem Service in the Neuse River Basin, 2006

Water treatment plants

Application of Two-Directional Time Series Models to Replace Missing Data, 661

Reliability-Constrained Optimization of Water Treatment Plant Design Using Genetic Algorithm, 647

Sorption of Statin Pharmaceuticals to Wastewater-Treatment Biosolids, Terrestrial Soils, and Freshwater Sediment, 638

SSPRSD Using a Filamentous Fungal Strain *Penicillium expansum BS30* Isolated from Wastewater Sludge, 694

Water use

Applying Multiobjective Genetic Algorithm to Analyze the Conflict among Different Water Use Sectors during Drought Period, 2013

Development of Soil and Water Assessment Tool Model on Human Water Use and Application in the Area of High Human Activities, Tianjin, China, 1201

Discharge Capacity of Labyrinth Side Weir Located on a Straight Channel, 1203

Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220

Water Use Intensities and the Composition of Production in Canada, 1965

Water waves

Estimating Alongshore Sediment Transport and the Nodal Point Location on the Delaware–Maryland Coast, 2042

Extended Boussinesq Equations for Water-Wave Propagation in Porous Media, 521

Extended Fourth-Order Depth-Integrated Model for Water Waves and Currents Generated by Submarine Landslides, 510

Hurricane Response of Nearshore Borrow Pits from Airborne Bathymetric Lidar, 2033

Impulse Product Parameter in Landslide Generated Impulse Waves, 2043

Influence of Relative Roughness and Reynolds Number on the Roll-Waves Spatial Evolution, 943

Laboratory Study of Unidirectional Focusing Waves in Intermediate Depth Water, 467

Nonhydrostatic Modeling of Nonlinear Deep-Water Wave Groups, 474

Waterfront structures

Lakefront Renaissance, 2200

Watersheds

Application of a Distributed Hydrologic Model to the November 17, 2004, Flood of Bull Creek Watershed, Austin, Texas, 1120

Case Study of Distributed Hydrologic Model for Soil and Nutrient Loss Estimation in Small Watershed, 2102

Derivation of Flood Hydrographs for Ungauged Upstream Subwatersheds Using a Main Outlet Hydrograph, 1160

Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629

Effect of Watershed Subdivision on SWAT Modeling with Consideration of Parameter Uncertainty, 1161

Enhanced Estimation of Terrestrial Loadings for TMDLs: Normalization Approach, 1995

Evaluating Urban Pollutant Buildup/Wash-Off Models Using a Madison, Wisconsin Catchment, 630

Evaluating Watershed Experiments through Recursive Residual Analysis, 1239

Evaluating Watershed Management within a River Basin Context Using an Integrated Indicator System, 1985

Evaluation of the Biocriteria of Streams in the San Diego Hydrologic Region, 684

Explanation for Anomalous Readings during Monitoring of a Best Management Practice, 1258

Hydrologic and Water Quality Integration Tool: HydroWAMIT, 11

Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088

Improving HSPF Modeling Accuracy from FTABLES: Case Study for the Illinois River Basin, 1119

Incorporating Surface Storage and Slope to Estimate Clark Unit Hydrographs for Ungauged Indiana Watersheds, 1148

Integrated Planning Framework for Urban River Rehabilitation, 2029

Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016

Knowledge-Based Model for Supplementary Irrigation Assessment in Agricultural Watersheds, 1242

Linking Pathogen Sources to Water Quality in Small Urban Streams, 637

New Approach to Identify Trend Pattern of Streamflows, 1081

Optimization of Watershed Control Strategies for Reservoir Eutrophication Management, 1291

Preservation of Watershed Regime for Low-Impact Development through Detention, 1056

Simulation-Optimization Framework to Support Sustainable Watershed Development by Mimicking the Predevelopment Flow Regime, 1996

Statistical Evaluation of Factors Affecting Indicator Bacteria in Urban Storm-Water Runoff, 763

Using a Distributed Hydrologic Model to Evaluate the Location of Urban Development and Flood Control Storage, 2020

Variability of *Escherichia coli* Concentrations in an Urban Watershed in Texas, 762

Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171

Watershed Management 2010, 2293

Watershed-Scale Impacts of Nitrogen from On-Site Wastewater Systems: Parameter Sensitivity and Model Calibration, 715

Waterways

Entering the Mainstream, 2203

Numerical Simulations of Efficiency of Curb-Opening Inlets, 948

Ports 2010, 2270

Wave attenuation

Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Wave crest

Undular Tidal Bores: Basic Theory and Free-Surface Characteristics, 1041

Wave diffraction

Quantitative Structural Health Monitoring by Ultrasonic Guided Waves, 551

Wave dispersion

Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039

Horizontal Dispersion in Gyres-Internal Wave Flow Field in a Rotating Circular Lake, 1115

Wave forces

Frequency Spectrum Analysis of Impact-Echo Waveforms for T-Beams, 161

Nonlinear Time-Domain Simulation of a Land-Based Oscillating Water Column, 2054

Wave generation

Impulse Product Parameter in Landslide Generated Impulse Waves, 2043

New Methodology for Laboratory Generation of Solitary Waves, 2055

Wave groups

Nonhydrostatic Modeling of Nonlinear Deep-Water Wave Groups, 474

Wave height

Channel Bed Slope Effect on the Height of Gravity Waves Produced by a Sudden Downstream Discharge Stoppage, 976

Wave measurement

Mechanistic Corrections for Determining the Resilient Modulus of Base Course Materials Based on Elastic Wave Measurements, 881

Wave overtopping
Overtopping Probability Constrained Optimal Design of Composite Channels Using Swarm Intelligence Technique, 1259
Time-Dependent Risk Assessment of Combined Overtopping and Structural Failure for Reinforced Concrete Coastal Structures, 2038
Wave Overtopping and Damage Progression of Stone Armor Layer, 2052

Wave pressure
Hydrodynamic Performance of Single- and Double-Wave Screens, 2034

Wave propagation
Analytical Solution for Biot Flow–Induced Damping in Saturated Soil during Shear Wave Excitations, 919
Celerity and Amplification of Supercritical Surface Waves, 1009
Complex Frequencies in Elastodynamics, with Application to the Damping-Solvent Extraction Method, 522
Effect of Fine Particle Migration on the Small-Strain Stiffness of Unsaturated Soils, 834
Effects of the Source on Wave Propagation in Pile Integrity Testing, 892
Extended Boussinesq Equations for Water-Wave Propagation in Porous Media, 521
Forced Vertical Vibration of Rigid Circular Disc on a Transversely Isotropic Half-Space, 548
One-Dimensional Study on Propagation of Tsunami Wave in River Channels, 950
Quantitative Structural Health Monitoring by Ultrasonic Guided Waves, 551
Unsteady Turbulence in Tidal Bores: Effects of Bed Roughness, 2051
Wave-Breaking Model for Boussinesq-Type Equations Including Roller Effects in the Mass Conservation Equation, 2031

Wave reflection
Hydrodynamic Performance of Single- and Double-Wave Screens, 2034
On a Possible Role of Rayleigh Surface Waves in Dynamic Slope Failures, 28

Wave refraction
Asymmetry in Directional Spreading Function of Random Waves due to Refraction, 2030

Wave runup
Infragravity Wave Motions and Runup over Shallow Fringing Reefs, 2056

Wave spectra
Moments-Based Reduced Spectral Wave Modeling of Frequency-and-Directional Spreading Effects on Wave-Induced Longshore Currents, 2047
Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Wave tanks
New Methodology for Laboratory Generation of Solitary Waves, 2055

Wave velocity
Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039
Nonlinear Time-Domain Simulation of a Land-Based Oscillating Water Column, 2054
Quantifying Biomediated Ground Improvement by Ureolysis: Large-Scale Biogrout Experiment, 941
Shear-Wave Velocity Correlations for Puyallup River Alluvium, 901

Wavelength
Nonlinear Time-Domain Simulation of a Land-Based Oscillating Water Column, 2054

Wavelet
Analysis of Frequency Nonstationarity via Continuous Wavelet Transform in the Response of Primary-Secondary Systems, 1763
Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138
Laboratory Study of Unidirectional Focusing Waves in Intermediate Depth Water, 467
Multiscale Wavelet-LQR Controller for Linear Time Varying Systems, 573

Waves
Identification of Nearshore Wave Characteristics Using Robotic Total Stations, 1787
Reliability Assessment for Operational Wave Forecasting System in Prince William Sound, Alaska, 2060
Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045

Weather conditions
Analysis of Adverse Weather for Excusable Delays, 439
Guidelines for Electrical Transmission Line Structural Loading, 2253
Integrated Framework for Quantifying and Predicting Weather-Related Highway Construction Delays, 429
Quality Control of Soil Water Data in Applied Climate Information System—Case Study in Nebraska, 1076
Reliability Assessment for Operational Wave Forecasting System in Prince William Sound, Alaska, 2060

Weathering
Influence of Water on the Compression Behavior of Decomposed Granite Soil, 842

Webs, structural
Effect of Fabric Webs on the Static Response of Spindle-Shaped Tensairity Columns, 1649
Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716
Shear Capacity of the Flange-Web Intersections of Brick Masonry Nonrectangular Sections, 1665

Weight
Adaptive Harmony Search Method for Structural Optimization, 1650
Comparative Study of Static and Dynamic Falling Weight Deflectometer Back-Calculations Using Probabilistic Approach, 1811
Importance of the Tail in Truck Weight Modeling for Bridge Assessment, 114
Planning for Commercial Vehicle Weight Limit Change: Application and Computer Software, 2129

Weirs
Critical Depth Relationships in Developing Open-Channel Flow, 960
Flow over Gabion Weirs, 1265

Hydraulic Relations for Clinging Flow of Sharp-Crested Weir, 984
New Approach for Predicting Flow Bifurcation at Right-Angled Open-Channel Junction, 1010

Welds
Compression Performance of Steel Pipelines with Welded Slip Joints, 1561
Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578
Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550
Externally Reinforced Welded I-Beam-to-Box-Column Seismic Connection, 461
Fatigue Testing of Stiffened Traffic Signal Structures, 1726
Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129
Parallel Axial-Flexural Hinge Model for Nonlinear Dynamic Progressive Collapse Analysis of Welded Steel Moment Frames, 1623
Plastic Behavior of Shear Tabs Welded to Flexible Wall Support, 1725

Wells
Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231
Optimization of Underground Water Pumping, 1246
Simple Method for Quick Estimation of Leaky-Aquifer Parameters, 1217
Simulation of Radial Collector Well in Shallow Alluvial Riverbed Aquifer Using Analytic Element Method, 1211
Transport Characteristics in a 3D Groundwater Circulation Flow Field by Experimental and Numerical Investigations, 2115
Unsteady Solution for Well Recharge in a Low Diffusive Aquifer, 1293
Water Well Resonance Induced by Preearthquake Signals, 575

Wetlands
Effect of Storm-Water Wetlands and Wet Ponds on Runoff Temperature in Trout Sensitive Waters, 1273
Evaluation of Storm-Water Wetlands in Series in Piedmont North Carolina, 624
Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746
General Model to Represent Multiple Wetland and Lake Stage-Storage Behavior, 1134
Simulating the Effect of Sulfate Addition on Methylmercury Output from a Wetland, 651
Treatment of Mixture of Sewage and Partially Treated Swine Wastewater by a Combination of UASB and Constructed Wetlands, 2122
Truncating Cross-Sectional Groundwater Models under Wetlands, 1110
Watershed Management 2010, 2293

Width
Air-Blast Effects on Structural Shapes of Finite Width, 1621

Wind
Dynamic Performance Simulation of Long-Span Bridge under Combined Loads of Stochastic Traffic and Wind, 115

Wind forces
Aerodynamic Damping in the Along-Wind Response of Tall Buildings, 1617
Methodology for Wind-Driven Rainwater Intrusion Fragilities for Light-Frame Wood Roof Systems, 1676
Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681

Wind gusts
Ultimate Wind Load Design Gust Wind Speeds in the United States for Use in ASCE-7, 1668

Wind loads
Aerostatic Reliability Analysis of Long-Span Bridges, 119
Analysis of Wind-Induced Clip Loads on Standing Seam Metal Roofs, 1641
Design of Dynamically Wind-Loaded Helical Piers for Small Wind Turbines, 1538
Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235
Effects of a Construction Tower Crane on the Wind Loading of a High-Rise Building, 1749
Engineering Perspectives on Reducing Hurricane Damage to Housing in CARICOM Caribbean Islands, 2092
Estimation of Probabilistic Extreme Wind Load Effects: Combination of Aerodynamic and Wind Climate Data, 532
Horizontal Wind Loads on Open-Frame, Low-Rise Buildings, 1615
Operational Requirements for Long-Span Bridges under Strong Wind Events, 107
Safety of Structures in Strong Winds and Earthquakes: Multihazard Considerations, 1640
"Three Little Pigs" Project: Hurricane Risk Mitigation by Integrated Wind Tunnel and Full-Scale Laboratory Tests, 2093
Tornado-Induced Wind Loads on a Low-Rise Building, 1616
Ultimate Wind Load Design Gust Wind Speeds in the United States for Use in ASCE-7, 1668
Variation of Internal Pressure with Varying Sizes of Dominant Openings and Volumes, 1737
Wind Loads, 2294
Wind Storm and Storm Surge Mitigation, 2295
Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722
Wind-Induced Pressures on Patio Covers, 1723
Wind-Induced Response Characteristics of Monolayer Cable Net, 490

Wind power
Supporting the Winds of Change, 2205

Wind pressure
Relationship between Probability of Breakage to Maximum Principal Stresses in Window Glass, 78
Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722

Wind speed
New Reference Wind Speed for Wind Turbines in Typhoon-Prone Areas in the Philippines, 1654
Tall Building Response Parameters: Sensitivity Study Based on Orthogonal Factorial Experiment Design Technique, 1622

Ultimate Wind Load Design Gust Wind Speeds in the United States for Use in ASCE-7, 1668

Wind tunnels

Effectiveness of Moisture and Fixatives in Controlling Mobility of Contaminated Soil Particles by Wind Forces, 2119

Effects of a Construction Tower Crane on the Wind Loading of a High-Rise Building, 1749

Numerical/Experimental Correlation of a Plasma Wind Tunnel Test on a UHTC-Made Nose Cap of a Reentry Vehicle, 72

Planform and Flexibility on Lift Characteristics for Flow over Low-Aspect Ratio Wings, 44

Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681

Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722

Wind-Induced Pressures on Patio Covers, 1723

Wind velocity

Error Assessment for Spectral Representation Method in Wind Velocity Field Simulation, 568

Window glass

Relationship between Probability of Breakage to Maximum Principal Stresses in Window Glass, 78

Wire products

Series Solution of Wire Coating Analysis Involving MHD Johnson-Segalman Fluid, 47

Wisconsin

Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312

Evaluating Urban Pollutant Buildup/Wash-Off Models Using a Madison, Wisconsin Catchment, 630

An Honorable Effort, 2221

Lakefront Renaissance, 2200

Life-Cycle Cost Analysis of Highway Intersection Safety Hardware Improvements, 1803

Women

Breaking into the Men's Room: Five Traits of Women Engineers with a Boardroom Seat, 2074

Closing the Gender Gap, 2199

"If These Women Can Do It, I Can Do It, Too": Building Women Engineering Leaders through Graduate Peer Mentoring, 2076

Perspectives on Leadership from Female Engineering Deans, 2077

Successful Leadership Development for Women STEM Faculty, 2075

Washington State's I-405 Project: Women in Industry Leadership, 2073

Wood

Characterization of Splitting Behavior of Bamboo Culms, 1479

Engineered Bamboo I-Joists, 1765

Finite-Element Modeling of Short-Term Field Response of Composite Wood-Concrete Floors/Decks, 1677

Fire Design of Timber-Concrete Composite Slabs with Screwed Connections, 1629

Flax Fiber-Reinforced Glued-Laminated Timber in Tension Perpendicular to the Grain: Experimental Study and Probabilistic Analysis, 1436

Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

Lewis Wernwag and the Colossus of 1812, 2152

New Yield Model for Wood Dowel Connections, 1731

Performance of Nitrogen-Removing Bioretention Systems for Control of Agricultural Runoff, 733

Removal of Selected Toxic Metals by a Modified Adsorbent, 2109

Stability of Built-Up Timber Beams and Columns: Accounting for Modulus of Elasticity Variability, 2156

Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. II: Fracture Mechanics Equations, 1483

Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689

Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761

Variability of the Compressive Strength of Parallel Strand Lumber, 499

Wood Materials, Nails, and Sheathing Connections from Early 20th Century Residential Buildings, 1469

Wood beams

Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. I: NDS Design Equations, 1482

Wood structures

Aligned with Nature, 2220

Experimental Seismic Response of a Full-Scale Light-Frame Wood Building, 1631

Glued Composite Timber-Concrete Beams. I: Interlayer Connection Specimen Tests, 1729

Glued Composite Timber-Concrete Beams. II: Analysis and Tests of Beam Specimens, 1730

Methodology for Wind-Driven Rainwater Intrusion Fragilities for Light-Frame Wood Roof Systems, 1676

Monotonic and Reverse-Cyclic Loading of Lag Screw Connections for Log Shear Wall Construction, 1349

Performance of Log Shear Walls Subjected to Monotonic and Reverse-Cyclic Loading, 1609

Performance-Based Procedure for Direct Displacement Design of Engineered Wood-Frame Structures, 1704

Simplified Direct Displacement Design of Six-Story Woodframe Building and Pretest Seismic Performance Assessment, 1688

Stability Capacity and Lateral Bracing Requirements of Wood Beam-Columns, 1628

Stability Capacity of Metal Plate Connected Wood Truss Assemblies, 1679

Stability of Built-Up Timber Beams and Columns: Accounting for Modulus of Elasticity Variability, 2156

Three-Dimensional Finite-Element Modeling of Nailed Connections in Wood, 1678

Three-Dimensional Seismic Response of a Full-Scale Light-Frame Wood Building: Numerical Study, 1611

Working conditions

AC Pipe in North America: Inventory, Breakage, and Working Environments, 1581

Workspace

Interactive Process of Microsimulation and Logistic Regression for Short-Term Work Zone Traffic Diversion, 1816

Quantification of Spatial Temporal Congestion in Four-Dimensional Computer-Aided Design, 378

Writing

Methodology for Written and Oral Presentation of Research Results, 1593

Wyoming

Upper Green River Basin (United States) Streamflow Reconstructions, 1113

X rays

Comprehensive Evaluation of AIMS Texture, Angularity, and Dimension Measurements, 1381

Drainability of Permeable Friction Course Mixtures, 1403

Effect of Fine Particle Migration on the Small-Strain Stiffness of Unsaturated Soils, 834

Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages, 1371

Yangtze River

Precise Control Survey for Erecting the Steel Pylons of the Third Nanjing Yangtze River Bridge, China: Case Study, 1769

Yield

Convexity of Yield Surface with Directional Distortional Hardening Rules, 507

Deflection Prediction for FRP-Strengthened Concrete Beams, 200

Young's modulus

Determining Hardness and Elastic Modulus of Asphalt by Nanoindentation, 22

In-Plane Stiffness of Semiauxetic Laminates, 576

Zambia

Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138

Zinc

Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

Zoning

Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309

Urban Land-Use Zoning Based on Ecological Evaluation for Large Conurbations in Less Developed Regions: Case Study in Foshan, China, 1929

Author Index

Aaleti, Sriram
see Henry, Richard S., 481

Aatmeeyata
Contribution of Traffic-Generated Nonexhaust PAHs, Elemental Carbon, and Organic Carbon Emission to Air and Urban Runoff Pollution, 774

Abad, Jorge D.
see Motta, Davide, 717

Abadie, Christopher
see Elseifi, Mostafa A., 1490

Abbas, Laith K.
Natural Vibrations of Open-Variable Thickness Circular Cylindrical Shells in High Temperature Field, 62

Abbas, Montasir, Ph.D., P.E.
see Li, Pengfei, Ph.D., 1835
see Madanu, Sunil, 1803

Abbo, Andrew, ed.
see Meier, Roger, ed., 2280

Abdallah, Maher
see Ghostine, Rabih, 992

Abdallah, Moatassem
see Marzouk, Mohamed, 381

Abdel-Aty, Mohamed
Real-Time Crash Risk Reduction on Freeways Using Coordinated and Uncoordinated Ramp Metering Approaches, 1832

Abdelgawad, Mohamed
Risk Management in the Construction Industry Using Combined Fuzzy FMEA and Fuzzy AHP, 416

Abdelrahman, Magdy, Ph.D.
see Attia, Mohamed, 1487
see Elyamany, Ahmed, 374

AbdelSalam, Sherif S.
Current Design and Construction Practices of Bridge Pile Foundations with Emphasis on Implementation of LRFD, 166

Abdi, M. Reza
see Delavari-Edalat, Farideh, 1935

Abdolhosseini, Mohammad
see Afzalimehr, Hossein, 1142

Abdoun, T.
see El Shamy, U., P.E., 32

Abdul Rahman, M. Y.
see Md Diah, J., 1872

Abdullah, R.
see Julien, P. Y., 969

Abdulrahman, Abdulrahman
Limit Slope in Uniform Flow Computations: Direct Solution for Rectangular Channels, 1136

Abdul-Rahman, H., Ph.D.
see Wang, Chen, Ph.D., 455

Abed, Farid H.
see Barakat, Samer A., 560

Abi Aad, Maya P.
Modeling Techniques of Best Management Practices: Rain Barrels and Rain Gardens Using EPA SWMM-5, 1099

Abichou, Tarek, Ph.D., P.E.
see Xu, Qiyong, Ph.D., P.E., 2118

Abid, Muhammad
Performance of a Nongasketed Flange Joint under Combined Internal Pressure and Bending Loading, 607

Abido, M. A.
Precedence-Preserving GAs Operators for Scheduling Problems with Activities' Start Times Encoding, 293

Abolhassani, Saeed
see Rasdorf, William, Ph.D., P.E., 1186

Abolmaali, Ali
Nonlinear Finite-Element-Based Investigation of the Effect of Bedding Thickness on Buried Concrete Pipe, 1873
see Motahari, Ardavan, Ph.D., 1821

Abouniaj, M.
see Harajli, M., 242

Abourida, Maurice, Ph.D.
see Rima, Jamil, Ph.D., 680

AbouRizk, Simaan, Ph.D., P.E.
Role of Simulation in Construction Engineering and Management, 427

Aboutaha, Riyad
see Huang, Jianwei, 225

Abowitz, Deborah A.
Mixed Method Research: Fundamental Issues of Design, Validity, and Reliability in Construction Research, 325

Abraham, David
see Gibson, Stanford, 812

Abraham, Dulcy M.
see Valentin, Vanessa, 1850

Abt, Steven R., P.E.
see Pierce, Michael W., 1090

Abu Ghazalah, Samer, Ph.D.
Global Economic Forces' Effect upon Urban Planning: Greater Amman Case Study, 1930

Abu Hammad, Ayman A.
Statistical Analysis on the Cost and Duration of Public Building Projects, 1327

Abudu, Shalamu
Application of Partial Least-Squares Regression in Seasonal Streamflow Forecasting, 1116
Infilling Missing Daily Evapotranspiration Data Using Neural Networks, 1235

Abu-Farsakh, Murad Y.
see Nazzal, Munir D., 33

Abu-Odeh, A.
see Kim, K.-M., 815

Achari, Gopal
Practical Method to Extract and Dechlorinate PCBs in Soils, 2105
see Chang, Yanjun, 2127

Acharya, Kumud
see Chen, Dong, 1025

Acharya, Sreedhar
see Venot, Jean-Philippe, 1267

Acton, K.
Elastoplastic Mesoscale Homogenization of Composite Materials, 520

Adachi, Takao
Comparative Assessment of Civil Infrastructure Network Performance under Probabilistic and Scenario Earthquakes, 1162

Adair, Cherri
see Shen, Hai, 727

Adamowski, Jan
Comparison of Multivariate Regression and Artificial Neural Networks for Peak Urban Water-Demand Forecasting: Evaluation of Different ANN Learning Algorithms, 1130

Adams, B. J.
see Kuzin, S. A., 1270

Adams, Barry J.
see Joseph, Shannon A., 1168

Adams, Craig
see Ding, Jie, 609

Adams, Mark
see Indraratna, Buddhima, 841

Adamsen, Floyd J.
see Perea, Hugo, 1241

Adamson, John
see Wilkinson, Alex, 915

Adarsh, S.
see Reddy, M. Janga, 1259

Adnan, M. A.
see Md Diah, J., 1872

Adriaanse, Arjen
Adoption and Use of Interorganizational ICT in a Construction Project, 414

Adu-Gyamfi, Y. O.
Critical Analysis of Different Hilbert-Huang Algorithms for Pavement Profile Evaluation, 309

Afshar, Abbas
Large-Scale Nonlinear Conjunctive Use Optimization Problem: Decomposition Algorithm, 1964

Afzalimehr, Hossein
Determination of Form Friction Factor, 1080
Effect of Vegetation on Banks on Distributions of Velocity and Reynolds Stress under Accelerating Flow, 1127
Hydraulic Geometry Relations for Stable Channel Design, 1142
see Motamedi, Artemis, 1082
see Motamedi, Artemis, 1145

Agaccioglu, Hayrullah
see Emiroglu, M. Emin, 1203

Aggelis, Dimitrios G.
Assessment of Construction Joint Effect in Full-Scale Concrete Beams by Acoustic Emission Activity, 547

AghaKouchak, A.
Modeling Radar Rainfall Estimation Uncertainties: Random Error Model, 1084

Agrawal, A. K.
Deterioration Rates of Typical Bridge Elements in New York, 134
see Pan, Y., 137
see Pan, Y., 138

Agrawal, Anil
see Xu, Zhou, 1675

Agudelo, Jairo
see Nadal, Norberto C., 1992

Agui, Juan
see Zeng, Xiangwu, 51

Ahlberg, Eric R.
see Lemnitzer, Anne, 936

Ahluwalia, Poonam Khanijo
Methodology for Estimating Optimum Reuse Time Span: Application to Reusable Computer Waste, 2114

Ahmad, Irtishad
see Azhar, Salman, 323
see Zhu, Yimin, 292

Ahmad, Syed Mohd.
Seismic Rotational Stability of Waterfront Retaining Wall Using Pseudodynamic Method, 16

Ahmadi, Azadeh
see Karamouz, Mohammad, 1209

Ahmed, A.
see Kodur, V. K. R., 248

Ahmed, Ehab A.
Bend Strength of FRP Stirrups: Comparison and Evaluation of Testing Methods, 177
Shear Performance of RC Bridge Girders Reinforced with Carbon FRP Stirrups, 98

Ahn, J., Ph.D.
see Kim, Yun Tae, Ph.D., 1401

Ahuja, Vanita
Benchmarking Framework to Measure Extent of ICT Adoption for Building Project Management, 368

Ai, J.
see Chen, J. F., 189

Aiello, Maria Antonietta
see Sciolti, Margherita Stefania, 257

Akan, A. Osman, P.E.
Design Aid for Water Quality Detention Basins, 1059

Akcakaya, Imge
see Ozcevik, Ozlem, Ph.D., 1936

Akguzel, Umut
Effects of Variation of Axial Load and Bidirectional Loading on Seismic Performance of GFRP Retrofitted Reinforced Concrete Exterior Beam-Column Joints, 185

Akinci, Burcu
see Kiziltas, Semiha, Ph.D., 274

Akkuzu, Erhan
see Mengü, Gulay Pamuk, 1233

Aktaş, Engin
see Teomete, Egemen, 1531

Akyuz, Ugurhan, Ph.D.
see Erdem, Ibrahim, Ph.D., 1526

Al Atik, Linda
Seismic Earth Pressures on Cantilever Retaining Structures, 903

Al Hussein, Mohamed, Ph.D., P.E.
see Alex, Dinu Philip, M.Sc., 388

Al Mohsin, Mohammed, Ph.D.
see Alnuaimi, Ali S., Ph.D., 375

Al Qady, Mohammed
Concept Relation Extraction from Construction Documents Using Natural Language Processing, 344

Alahmad, Mahmoud, P.E.
Learning Applications in the Architectural Engineering Educational Setting, 90

Alam, Shoeb R.
see Fang, Xing, P.E., 948

Alameddine, Ibrahim
Robust Multivariate Outlier Detection Methods for Environmental Data, 755

Alampalli, S.
see Pan, Y., 137
see Pan, Y., 138

Alarcón, Luis F.
see González, Vicente, 426

Alashker, Yasser, Ph.D.
Progressive Collapse Resistance of Steel-Concrete Composite Floors, 1724

Albaji, Mohammad
Comparison of Different Irrigation Methods Based on the Parametric Evaluation Approach in Abbas Plain: Iran, 1213

Alberdi, Jugatx Ansotegui
see Bruckermann, Oliver, 88

Albrecht, Susan
see Goodchild, Anne, Ph.D., 1889

Albuquerque, Bruno Edson
see Alcoforado de Moraes, Márcia Maria Guedes, 2009

Alcoforado de Moraes, Márcia Maria Guedes
Joint Water Quantity-Quality Management in a Biofuel Production Area—Integrated Economic-Hydrologic Modeling Analysis, 2009

Al-Derham, Hassan
see Orabi, Wallied, 1339

Alex, Dinu Philip, M.Sc.
Artificial Neural Network Model for Cost Estimation: City of Edmonton's Water and Sewer Installation Services, 388

Alexander, Nadya
see Burt, Charles M., 1252

Alfonso, Leonardo, Ph.D.
Multiobjective Optimization of Operational Responses for Contaminant Flushing in Water Distribution Networks, 1963

Alfredo, Katherine
Observed and Modeled Performances of Prototype Green Roof Test Plots Subjected to Simulated Low- and High-Intensity Precipitations in a Laboratory Experiment, 1100

AlGali, H., Ph.D.
see Daouadji, A., 517

Al-Hadidy, A. I.
Comparative Performance of the SMAC Made with the SBS- and ST-Modified Binders, 1406

Al-Hamdan, O. Z.
Soil Moisture Profile Development from Surface Observations by Principle of Maximum Entropy, 1089

Al-Harthi, Ali S., M.Sc.
see Alnuaimi, Ali S., Ph.D., 375

Al-Humaidi, H. M.
Construction Safety in Kuwait, 1502

Al-Hussein, Mohamed, Ph.D., P.E.
see Hasan, Shafiul, 332

Ali, Mohamed
see Haskett, Matthew, 219

Ali, Souma M. Alhaj
see Abu Hammad, Ayman A., 1327

Alin, Pauli
see Di Marco, Melissa K., 1329

Al-Ismaily, S.
see Kacimov, A. R., 1207

Al-Kaisy, Ahmed
Car-Following Interaction and the Definition of Free-Moving Vehicles on Two-Lane Rural Highways, 1888

Alkarkhi, Abbas F. M.
see Ho, Yeek Chia, 752

Allard, M.
see Buteau, S., 168

Allasia, D.
see Paz, A. R., 1072

Allou, Fatima
Shakedown Approaches to Rut Depth Prediction in Low-Volume Roads, 600

Al-Maktoumi, A.
see Kacimov, A. R., 1207

Almedeij, Jaber
Remarks on Camp's Criterion for Self-Cleansing Storm Sewers, 1216

Almeida, Marcio S. S.
see Oliveira, Henrique Magnani, 799
see Oliveira, José R. M. S., 867

Almeida, Maria C. F.
see Oliveira, José R. M. S., 867

Almohsen, Nora
see Almedeij, Jaber, 1216

Almusallam, Tarek H., Ph.D.
see Alsayed, Saleh H., Ph.D., 195
see Alsayed, Saleh H., 244

Alnuaimi, Ali S., Ph.D.
Causes, Effects, Benefits, and Remedies of Change Orders on Public Construction Projects in Oman, 375

Alonso, Andrés M.
see Scotto, Manuel G., 2048

Al-Ostaz, Ahmed
Deterioration of Bond Integrity between Repair Material and Concrete due to Thermal and Mechanical Incompatibilities, 1354

Alp, İbrahim
see Türk, Tuğba, 656

Alptuna, Giray
see Yazıcı, Halit, 1466

Al-Qadi, Imad L., P.E.
Data Analysis Techniques for GPR Used for Assessing Railroad Ballast in High Radio-Frequency Environment, 1830
Linear Viscoelastic Modeling for Hot-Poured Crack Sealants at Low Temperature, 1454
see Huang, Baoshan, ed., 2267

Alramahi, Bashar
Effect of Fine Particle Migration on the Small-Strain Stiffness of Unsaturated Soils, 834

Al-Salloum, Yousef A., Ph.D.
see Alsayed, Saleh H., Ph.D., 195
see Alsayed, Saleh H., 244

Alsayed, Saleh H.
Seismic Rehabilitation of Corner RC Beam-Column Joints Using CFRP Composites, 244
Seismic Response of FRP-Upgraded Exterior RC Beam-Column Joints, 195

Al-Shamrani, Mosleh, Ph.D.
see Puppala, Anand J., Ph.D., P.E., 1446

Al-Sheikhly, Mohamad
see Kim, Jo-Chun, 675

Alshibli, Khalid A.
see Alramahi, Bashar, 834
see Hasan, Alsidqi, 57

Altay, Selcuk
see Parvin, Azadeh, 183

Altunişik, Ahmet Can
see Bayraktar, Alemdar, 1499

Alvarez, Allex E.
Drainability of Permeable Friction Course Mixtures, 1403
Stone-on-Stone Contact of Permeable Friction Course Mixtures, 1470

Álvarez, Rogelio
see Kovalenko, Yuriy, 977

Alvarez-Valencia, Daniel
Structural Performance of Wood Plastic Composite Sheet Piling, 1484

Alves da Silva, Humberto
see Galvão, Terezinha Cássia de Brito, Ph.D., 2082

Aly, T.
Effect of Pore-Size Distribution on Shrinkage of Concretes, 1399

Amadei, Bernard
Model of Integrating Humanitarian Development into Engineering Education, 1590

Amarasiri, Saumya
Modeling of Crack Depths in Digital Images of Concrete Pavements Using Optical Reflection Properties, 1840

Amati, Jill Priest
see Bhatia, Shobha, Ph.D., 2076

Ambrose, Robert B., P.E.
see Cerucci, Marcelo, Ph.D., 723

Ambrožič, Tomaž
see Marjetič, Aleš, 1778

Ameh, O. J.
Professionals' Ambivalence toward Ethics in the Nigerian Construction Industry, 1582

Amekudzi, Adjo A., Ph.D.
Cultivating Research and Information Skills in Civil Engineering Undergraduate Students, 1584

Amin, M. S.
see Hekal, Eisa E., 2124

Amirkhanian, Serji N.
see Koduru, Hari Krishan, 1805
see Putman, Bradley J., 1356
see Xiao, Feipeng, Ph.D., P.E., 1461

Amistad, Franklyn T.
Assessment of the Pedestrianization Policy in Vigan City: UNESCO World Heritage Site, 1918

Ammendola, R.
see Megali, G., 1442

Amorim, Carlos Alberto
see Alcoforado de Moraes, Márcia Maria Guedes, 2009

Ampiah, Nancy
Effect of Wrinkles on the Circumferential Strength of a Cast-in-Place Composite Polymer Liner Used in Retrofitting Pressure Pipes, 1492

An, Shinwhan
see Lee, Changho, 824

An, Shu-Qing
see Fu, Jie, 758

Anagnostopoulos, Nikolaos S.
see Georgiadis, Aggelos S., 1379

Anani, Shadi B., Ph.D., P.E.
Estimation of Highway Maintenance Marginal Cost under Multiple Maintenance Activities, 1881

Anastasopoulos, I.
see Giannakou, A., 891

Anastasopoulos, Panagiotis Ch.
Cost Savings Analysis of Performance-Based Contracts for Highway Maintenance Operations, 1189
Frequency of Change Orders in Highway Construction Using Alternate Count-Data Modeling Methods, 403
Influence of Highway Project Characteristics on Contract Type Selection: Empirical Assessment, 1196
see Bhargava, Abhishek, 434

Anctil, F.
see Yonaba, H., 1085

Anderson, D. S.
see Tullis, B. P., 1202

Anderson, Eric J.
Real-Time Hydraulic and Hydrodynamic Model of the St. Clair River, Lake St. Clair, Detroit River System, 995

Anderson, F. E.
see Song, Z. W., 1226

Anderson, J. Brian, ed.
see Hussein, Mohamad H., ed., 2226

Anderson, Kristofor
see French, Steven P., 2083

Anderson, Marc A.
see Muñoz, Jose F., 1350

Anderson, Mark J.
Incorporation of Air Emissions in Dredging Method Selection, 2046

Andrade, Anísio
see Challamel, Noël, 536

Andrawes, Bassem
Active Confinement of Reinforced Concrete Bridge Columns Using Shape Memory Alloys, 102

André, Alann
Flax Fiber-Reinforced Glued-Laminated Timber in Tension Perpendicular to the Grain: Experimental Study and Probabilistic Analysis, 1436

Andreopoulos, Yiannis
see Nian, Weimin, 59

Andrieu, Hervé
see Gironás, Jorge, 1055

Angomas, F.
see Barr, P. J., 1557

Aniol, R. John, P.E.
Super Span (SuperSpan), 2160

Annable, W. K.
see Kuta, R. W., 983

Anochie-Boateng, Joseph, Ph.D.
Characterizing Resilient Behavior of Naturally Occurring Bituminous Sands for Road Construction, 1465

Anthony, Ania, P.E.
see Berthelot, Curtis, Ph.D., P.E., 1806

Antoniou, C.
see Yannis, G., 1838

Antunes, António P.
see Repolho, Hugo M., 1892

Anwar, Arif A.
see Haq, Zia Ul, 1277

Apipattanavis, Somkiat
Integrated Framework for Quantifying and Predicting Weather-Related Highway Construction Delays, 429
Local Polynomial–Based Flood Frequency Estimator for Mixed Population, 1123

Apsley, David D.
see Cuthbertson, Alan J. S., 5

Arabi, Mazdak
see Sharvelle, Sybil, 9

Arabkhedri, Mahmood
Effect of Adaptive Cluster Sampling Design on Accuracy of Sediment Rating Curve Estimation, 1071

Araghinejad, Shahab
see Moghaddasi, Mahnosh, 1234

Aral, Mustafa M.
Optimal Design of Sensor Placement in Water Distribution Networks, 1959

Arambula, Edith
Experimental Measurement and Numerical Simulation of Water Vapor Diffusion through Asphalt Pavement Materials, 1407

Arasan, V. Thamizh
Microsimulation Study of Effect of Volume and Road Width on PCU of Vehicles under Heterogeneous Traffic, 1908
Microsimulation Study of the Effect of Exclusive Bus Lanes on Heterogeneous Traffic Flow, 1922
see Arkatkar, Shriniwas S., 1909

Arboleda, Carlos A.
see Peña-Mora, Feniosky, 289

Arboleda-Monsalve, Luis G.
see Zapata-Medina, David G., 608

Archer, Jeffery
Signal Treatments to Reduce the Likelihood of Heavy Vehicle Crashes at Intersections: Microsimulation Modeling Approach, 1856

Ardeshir-Behrestaghi, Azizollah
see Eskandari-Ghadi, Morteza, 548

Arditi, David
Graduate Education in Construction Management, 1599
Predicting the Outcome of Construction Litigation Using an Integrated Artificial Intelligence Model, 269
see Isik, Zeynep, 1318
see Kale, Serdar, 347
see Kim, Ahim, 390
see Lee, Dong-Eun, 313
see Ozorhon, Beliz, 1336

Arduino, Pedro, .Ph.D., P.E., ed.
see Finno, Richard, .Ph.D., P.E., ed., 2237

Aref, Amjad J.
see Ballantyne, Graeme J., 1621
see Warn, Gordon P., 260

Arega, Feleke
Numerical Age and Residence-Time Mapping for a Small Tidal Creek: Case Study, 2049

Ariaratnam, Samuel T.
see Patel, Alpeshkumar, 1580

Ariffin, A. K.
see Hamid, R., 1485

Aristizabal-Ochoa, J. Dario
see Zapata-Medina, David G., 608

Arkatkar, Shriniwas S.
Effect of Gradient and Its Length on Performance of Vehicles under Heterogeneous Traffic Conditions, 1909
see Arasan, V. Thamizh, 1908

Armendariz, Al
see Kim, Jo-Chun, 675

Arnepalli, D. N.
see Rowe, R. Kerry, 865

Arranja, Carina
see Rijo, Manuel, 1199

Arsenault, Aaron
Autonomous Mowing—Improving Efficiency and Safety of Roadside Vegetation Control, 1185

Arslan, Haydar
Engineering Properties of Lunar Soil Simulant JSC-1A, 46

Arwade, Sanjay R.
Variability of the Compressive Strength of Parallel Strand Lumber, 499

Asa, Eric
see Saafi, Mohamed, 1537

Asanprakit, Auttakit
see Sugimoto, Mitsutaka, 382

ASCE
ASCE Official Register 2010, 2227
Compaction Grouting Consensus Guide, 2230
Design of Fiberglass-Reinforced Plastic (FRP) Stacks, 2235
Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-10 (Book), 2263
Structural Applications of Steel Cables for Buildings, 2283
Structural Design of Interlocking Concrete Pavement for Municipal Streets and Roadways [ASCE/T&DI/ICPI 58-10], 2284
Tensile Membrane Structure, 2287
Transactions of the American Society of Civil Engineers 2009, 2290

ASCE Inter-Institute Levee Committee
So, You Live Behind a Levee! What you should know to protect your home and loved ones from floods, 2279

ASCE/EWRI
Standard Guideline for the Geostatistical Estimation and Block-Average of Homogeneous and Isotropic Saturated Hydraulic Conductivity, 2282

Aschheim, Mark
Engineered Bamboo I-Joists, 1765
see Syntzirma, Despina V., M.Sc., 1606

Asghar, S.
see Sajid, M., 47

Asghari, Keyvan
see Behzad, Mohsen, 299

Ashjari, M. A.
see Tamayol, A., 612

Ashley (neé Hartt), Sarah
see Davids, William G., P.E., 97

Ashley, R. M., C.Eng.
see Schellart, A. N. A., Ph.D., 986

Ashuri, Baabak
Time Series Analysis of ENR Construction Cost Index, 436

Ashwood, Wesley H.
see Neupauer, Roseanna M., Ph.D., P.E., 2018

Askarinejad, Hossein
see Sadeghi, Javad, 1903

Asnani, Vivake
see Zeng, Xiangwu, 51

Asprone, Domenico, Ph.D.
Assessment of the Electromagnetic Disturbance of a Glass Fiber Reinforced Composite Fencing Structure, 239

Assante, Dario
see Asprone, Domenico, Ph.D., 239

Ataie-Ashtiani, B.
Experimental Investigation of Clear-Water Local Scour of Compound Piers, 979
see Beheshti, A. A., 473

Atalay, E.
Removal of Selected Toxic Metals by a Modified Adsorbent, 2109

Atan, I.
see Md Diah, J., 1872

Athanasopoulos, George A.
see Bray, Jonathan D., 10

Attia, Mohamed
Sensitivity of Untreated Reclaimed Asphalt Pavement to Moisture, Density, and Freeze Thaw, 1487

Attoh-Okine, N. O., P.E.
see Adu-Gyamfi, Y. O., 309

Aubeny, C. P.
Mechanics of Drag Embedment Anchors in a Soft Seabed, 780

Aubeny, Charles Paul, Ph.D., P.E.
see Yang, Ming, Ph.D., 908

Aubertin, Michel
see Li, Li, 13

Auer, Martin T.
see Rucinski, Daniel K., 688

Augenbroe, Godfried
see Pati, Debajyoti, 1513

Augenti, N.
Constitutive Models for Tuff Masonry under Uniaxial Compression, 1467

Learning from Construction Failures due to the 2009 L'Aquila, Italy, Earthquake, 1550

Avellaneda, Pedro
Modeling Urban Storm-Water Quality Treatment: Model Development and Application to a Surface Sand Filter, 616

Avila, Catherine M. C., ed.
see Burns, Susan E., ed., 2276

Awan, Abdul Waheed
see Abid, Muhammad, 607

Awuah-Offei, Kwame
see Frimpong, Samuel, 452

Awwad, Rita E.
see Ioannou, Photios G., 408

Axe, Lisa
see Ndiba, Peter K., 660

Aydın, Serdar
see Yazıcı, Halit, 1466

Ayenu-Prah, A. Y., Ph.D.
see Adu-Gyamfi, Y. O., 309

Ayodele, Oluropo Rufus
see Frimpong, Samuel, 452

Ayol, Azize
Rheological Characterization of Sludges during Belt Filtration Dewatering Using an Immobilization Cell, 721

Ayoub, Ashraf
Finite-Element Model for Pretensioned Prestressed Concrete Girders, 1648

Ayuga, F.
see Gallego, E., 394

Ayuso, J. L.
see Castro-Orgaz, O., 960

Azamathulla, H. Md.
Genetic Programming to Predict Bridge Pier Scour, 958
Genetic Programming to Predict River Pipeline Scour, 1577

Azhar, Salman
Action Research as a Proactive Research Method for Construction Engineering and Management, 323

Aziz, Zeeshan
see Peña-Mora, Feniosky, 289

Babilotte, Antoine
Fugitive Methane Emissions from Landfills: Field Comparison of Five Methods on a French Landfill, 701

Babu, G. L. Sivakumar
Reliability Analysis of Buried Flexible Pipe-Soil Systems, 1565
see Basha, B. Munwar, 21
see Basha, B. Munwar, 852
see Haldar, Sumanta, 19

Babu, K. S. Jinesh
see Mohan, S., 273

Bacchi, Baldassare
see Pilotti, Marco, 1014

Bachand, P. A. M., Ph.D.
Feasibility Study and Conceptual Design for Using Coagulants to Treat Runoff in the Tahoe Basin, 746

Badalamenti, V.
Simplified Model for Compressive Behavior of Concrete Columns Strengthened by Steel Angles and Strips, 482

Badawi, Moataz
CFRP Repair of RC Beams with Shear-Span and Full-Span Corrosions, 208

Badie, Sameh S., Ph.D., P.E.
Relaxing the Stud Spacing Limit for Full-Depth Precast Concrete Deck Panels Supported on Steel Girders (Phase I), 140

Badiru, Adedeji B.
Project Management Application for Engineering Program Accreditation Preparation, 1586

Badr, A. W.
see Arega, Feleke, 2049

Bae, Deg-Hyo
see Shamir, Eylon, 1158

Bae, Jinwoo
see Kim, Yong-Woo, 92

Baeck, Mary Lynn
see Javier, Julie Rose N., 1058

Bagchi, Ashutosh
Model-Based Damage Identification in a Continuous Bridge Using Vibration Data, 1510

Baghvand, Akbar
see Karamouz, Mohammad, 1291

Bahia, Hussain U.
see Cho, Dong-Woo, 1370

Bahor, Brian, Q.E.P.
Life-Cycle Assessment of Waste Management Greenhouse Gas Emissions Using Municipal Waste Combustor Data, 697

Bai, Guo-Liang
see Fu, Jing-Li, 2134

Bai, Sen, P. E.
Evaluation of the Advection Scheme in the HSPF Model, 1075

Bai, Yong, Ph.D., P.E.
see Chui, Ka Wah (Calvin), P.E., 89

Bai, Yuhua
see Liu, Baicang, 669

Baidya, D. K.
see Manna, B., 929

Bailey, Michael, P.E.
see Stuedlein, Armin W., Ph.D., P.E., 851

Bailey, Nathan
see Xia, Meng, 725

Baise, Laurie G.
see Oommen, Thomas, 304
see Oommen, Thomas, 931

Bajcsy, Peter
see Singh, Abhishek, 283

Bakeer, Reda M., Ph.D., P.E.
see Sever, V. Firat, Ph.D., P.E., 1365

Baker, Rachel A.
Locating Nested Monitoring Wells to Reduce Model Uncertainty for Management of a Multilayer Coastal Aquifer, 1132

Baker, William F., P.E.
The Burj Khalifa Triumphs: Engineering an Idea: The Realization Of the Burj Khalifa, 2169
The Burj Khalifa Triumphs: Reaching toward The Heavens, 2170

Balachandar, Ram
see Roussinova, Vesselina, 956
see Tandalam, Arjun, 1006

Balaramudu, Vasanth Kumar
see Haan, F. L., 1616

Balasubramanian, R.
see Vijayaraghavan, K., 734

Ball, Jane
Housing Law Is Dead. Long Live European Housing Law?, 1295

Ball, William P.
see Murphy, Rebecca R., 627

Ballantyne, Graeme J.
Air-Blast Effects on Structural Shapes of Finite Width, 1621

Ballard, Glenn
see Kim, Yong-Woo, 1337

Ballarini, R.
see Piccinin, R., 533

Ballestero, Thomas, Ph.D., P.E.
see Avellaneda, Pedro, 616

Ballew, B.
see Steets, J., 1865

Ballio, Francesco
Temporal Scales for Live-Bed Scour at Abutments, 985

Ballock, Craig
see Chopra, Manoj, 1098

Balogh, Jeno
see Gutkowski, Richard M., 1677

Bambach, M. R.
Unified Element and Section Approach to Design of Cold-Formed Steel Structures, 1642

Bamonte, P.
Thermal and Mechanical Properties at High Temperature of a Very High-Strength Durable Concrete, 1402

Bandini, Paola
see Bianchini, Alessandra, 1807

Bandyopadhyay, J. N.
see Pradyumna, S., 515

Banerjee, Goutam
Treatment of Arsenic-Laden Water Plant Sludge by Anaerobic Digestion, 2108

Bangrakulur, K.
see Gordaninejad, F., 1619

Bank, Lawrence C.
see Vanevenhoven, Linda M., 1663

Banks, M. Katherine
see Sharvelle, Sybil, 9

Bansal, Rajeev K.
Analytical Study of Water Table Fluctuation in Unconfined Aquifers due to Varying Bed Slopes and Spatial Location of the Recharge Basin, 1147

Bapat, Ameya
Diesel Particulate Matter Number Emissions: Evaluation of Existing Modal Emission Modeling Approaches, 1799

Baptista, António Miguel da Costa, Ph.D.
see Santos, Luís Guilherme de Picado, Ph.D., 1913

Barak, R.
see Sacks, R., 1585

Barakat, Samer A.
Experimental Investigation of the Axial Capacity of Inelastically Pretwisted Steel Bars, 560

Baran, Irina
see Bărbuţă, Marinela, 1419

Baratian-Ghorghi, Z.
see Ataie-Ashtiani, B., 979

Barbato, M.
Probabilistic Push-Over Analysis of Structural and Soil-Structure Systems, 1738

Barbato, Michele
New Multidimensional Visualization Technique for Limit-State Surfaces in Nonlinear Finite-Element Reliability Analysis, 597

Barbosa, Bruno Henrique
see Faria, Marco Tulio C., 1038

Barbosa, Susana M.
see Scotto, Manuel G., 2048

Bărbuţă, Marinela
Comparison of Mechanical Properties for Polymer Concrete with Different Types of Filler, 1419

Bardet, Jean-Pierre
see Lu, Xilin, 561

Bárdossy, A.
see AghaKouchak, A., 1084

Bareither, Christopher A.
Performance of North American Bioreactor Landfills. I: Leachate Hydrology and Waste Settlement, 706
see Barlaz, Morton A., 707

Barfield, Mary
see Ghafoori, Nader, 1445

Barfuss, Steven L., P.E.
see Sharp, Zachary B., 946

Bar-Gera, Hillel
Proper Presentation of Flow-Speed-Density Plots of Large Data Sets, 1861

Barkdoll, Brian D.
see Anderson, Mark J., 2046

Barker, Michael
see McConnell, Jennifer Righman, 99

Barlaz, Morton A.
Performance of North American Bioreactor Landfills. II: Chemical and Biological Characteristics, 707
see Bareither, Christopher A., 706

Barnes, Frank S.
see Levine, Jonah, M.S., 447

Barnes, Jenifer
see Park, Joseph, P.E., 2061

Barnes, Robert W.
see Wade, Samuel A., 1363

Barnett, F. Anthony
Upper Green River Basin (United States) Streamflow Reconstructions, 1113

Barot, Suhail
see Linderman, Lauren E., 601

Barr, P. J.
Differences between Calculated and Measured Long-Term Deflections in a Prestressed Concrete Girder Bridge, 1557

Barreto, Wilmer
Multiobjective Evolutionary Approach to Rehabilitation of Urban Drainage Systems, 2014

Barrett, David, Ph.D., P.E.
see Hong, Jung-Pyo, Ph.D., 1678

Barrett, Michael
see Eck, Bradley, 1272
see Takamatsu, Masatsugu, 672

Barrett, Michael E.
see Klenzendorf, J. Brandon, 1156

Barron, Ronald
see Tandalam, Arjun, 1006

Barros, J. A. O.
see Bianco, Vincenzo, 180

Barros, Joaquim A. O.
see Cunha, Vítor M. C. F., 1340

Bart, Hans-Jörg
see Ning, Ping, 770

Barták, Jiří
Performance of a Retrofitted Medieval Stone Bridge under a Severe Flood, 1545

Barth, Karl
see McConnell, Jennifer Righman, 99
see McConnell, Jennifer Righman, 121
see McConnell, Jennifer Righman, 1756

Barthélemy, Eric
see Cienfuegos, Rodrigo, 2031

Bartlett, S. F., P.E.
see Newman, M. P., 802

Barton, Gary
see McDonald, Richard, 1054

Basha, B. Munwar
Optimum Design for External Seismic Stability of Geosynthetic Reinforced Soil Walls: Reliability Based Approach, 852
Optimum Design of Bridge Abutments under Seismic Conditions: Reliability-Based Approach, 112
Seismic Rotational Displacements of Gravity Walls by Pseudodynamic Method with Curved Rupture Surface, 21

Bashir, H. A.
Removal of Redundant Relationships in an AON Project Network for Evaluating Schedule Complexity, 392

Basilio, Ismael, Ph.D.
see Oliveira, Daniel V., Ph.D., 207

Baskaran, Bas A., Ph.D., P.E.
see Molleti, Suda, Ph.D., 2131

Basseville, Michèle
Handling the Temperature Effect in Vibration Monitoring: Two Subspace-Based Analytical Approaches, 495

Basu, Biswajit
Multiscale Wavelet-LQR Controller for Linear Time Varying Systems, 573
see Chakraborty, Arunasis, 1763

Basu, Debasis
Evaluation of VMS-Based Traffic Information Using Multiclass Dynamic Traffic Assignment Model: Experience in Kolkata, 1928
Stated Preference Approach for Valuation of Travel Time Displayed as Traffic Information on a VMS Board, 1941

Bates, Paul D.
see Kuiry, Soumendra Nath, 994

Bati, S. Briccoli
Time-Dependent Behavior of Laminated Glass, 1383

Batiste, Susan
see Arslan, Haydar, 46

Batroney, Thomas
Parking Deck's First Flush, 1069

Batsevych, O.
see Naess, A., 488

Battaglia, Irene K.
Proposed Behavioral Model for Deicer Scaling Resistance of Slag Cement Concrete, 1380

Baumert, Mike
see Lee, Luke S., 203

Baur, Stuart W.
Architectural Engineering Curriculum at Missouri University of Science and Technology, 83

Bausano, Jason
see Li, Xinjun, 1355

Bautista, E.
External Iterative Coupling Strategy for Surface-Subsurface Flow Calculations in Surface Irrigation, 1276
see Clemmens, A. J., 1251
see van Overloop, P. J., 1281

Bawazir, A. Salim
see Abudu, Shalamu, 1235

Bayoglu Flener, Esra
Testing the Response of Box-Type Soil-Steel Structures under Static Service Loads, 103

Bayraktar, Alemdar
Finite-Element Analysis and Vibration Testing of a Two-Span Masonry Arch Bridge, 1499

Bayraktar, Mehmet Emre
LEED Implementation Guide for Construction Practitioners, 85
Scoring Approach to Construction Bond Underwriting, 410
see Cui, Qingbin, 1172
see Ossman, George, 1323

Bažant, Zdeněk P.
see Yu, Qiang, 463

Bazeos, Nikitas
see Karavasilis, Theodore L., 1698

Bea, Robert G., Ph.D., P.E., G.E.
see Storesund, Rune, D.Eng., P.E., G.E., 2045

Beaubouef, Rick T.
see Sequeiros, Octavio E., 987

Becerik-Gerber, Burcin
Building Information Modeling in Architecture, Engineering, and Construction: Emerging Research Directions and Trends, 1595
see Kent, David C., 396

Beck, James L.
see Taflanidis, Alexandros A., 603

Becker, Wilfried
see Ivanova, Jordanka, 579

Becque, Jurgen
Inelastic Plate Buckling, 571

Bedient, Philip B.
see Fang, Zheng, 2020

Béguin, Gilbert H.
Catastrophic Sliding of a Concrete Deck during Its Launching on the Steel Girders of a Composite Bridge, 1509
Graphical Determination of the Shear Center in Thin-Walled Asymmetrical U Profiles, 2147

Beheshti, A. A.
Experimental Study of Three-Dimensional Flow Field around a Complex Bridge Pier, 473
see Ataie-Ashtiani, B., 979

Behnood, Ali
see Ghandehari, Masoud, 1346

Behzad, Mohsen
Comparative Study of SVMs and ANNs in Aquifer Water Level Prediction, 299

Beighley, R. Edward
Runoff Characteristics for Construction Site Erosion Control Practices, 1245

Belarbi, Abdeldjelil, P.E.
Effect of Contamination on Reinforcing Bar-Concrete Bond, 1515

Belaud, G.
see Munier, S., 1274

Beliveau, Yvan, P.E.
see Chen, Qian, 333

Belletti, B.
Behavior of Prestressed Steel Beams, 1719

Beltran, Juan Felipe
Numerical Simulation of Damage Localization in Polyester Mooring Ropes, 552

Benavides, Juan
see Vives, Antonio, 355

Bender, Donald A.
see Graham, Drew A., 1349
see Graham, Drew A., 1609
see Kimble, Robert E., P.E., 2156

Bene, József Gergely
Neutral Search Technique for Short-Term Pump Schedule Optimization, 1972

Benfer, N. P.
Modeling the Effect of Flow Structure Selection on Residence Time in an Artificial Canal System: Case Study, 2037

Benli, Bogachan
Performance of Penman-Monteith FAO56 in a Semiarid Highland Environment, 1282

Benmokrane, Brahim
see Ahmed, Ehab A., 98
see Ahmed, Ehab A., 177
see Robert, Mathieu, 211
see Robert, Mathieu, 212
see Robert, Mathieu, 213

Bennett, Jeff
see Qiu, Yaqin, Ph.D., 1969

Bennett, V.
see El Shamy, U., P.E., 32

Bennitz, Anders
see Schmidt, Jacob W., 216

Benson, Craig H.
see Bareither, Christopher A., 706
see Barlaz, Morton A., 707

Bentz, Dale
see Sant, Gaurav, 1371

Bentz, Evan C.
Shear Strength of Large Concrete Members with FRP Reinforcement, 240

Berg, Sanford
see Marques, Rui Cunha, 1197

Bergdahl, Lars
see Bondelind, Mia, 771

Berger, Klaus
see Melchior, Stefan, 705

Bergman, L. A.
see Chen, Y., 1747

Bergmeister, Konrad
see Strauss, Alfred, 1614

Berkoz, Lale, Ph.D.
Intrametropolitan Determinants of Foreign Investment Firms in Istanbul, 1943

Berman, Jeffrey W.
Field Monitoring and Repair of a Glass Fiber-Reinforced Polymer Bridge Deck, 1516

Reduced Link Sections for Improving the Ductility of Eccentrically Braced Frame Link-to-Column Connections, 1662
see Brown, David L., 122

Bernal, Dionisio
Load Vectors for Damage Location in Systems Identified from Operational Loads, 462

Bernath Walker, Sean
Systems Management Study of a Private Brownfield Renovation, 1945

Berney, Ernest S.
see Peters, John F., 804

Bernhard, J. T.
see Linderman, Lauren E., 601

Berni, Alessandro, Ph.D.
see Brunone, Bruno, Ph.D., 1016

Bernold, Leonhard E.
Experimental Research in Construction, 317

Bernstein, A. G.
see Paris, A., 1144

Berthelot, Curtis, Ph.D., P.E.
Triaxial Frequency Sweep Characterization of Asphalt-Aggregate Adhesion in Saskatchewan Asphaltic Mixes, 1806

Bertolini, Luca
Filling of a Flooded Gypsum Mine with a Flowable Soil-Cement Mix, 1411

Besamusca, Jeroen
see Liu, Gang, 1431

Beskos, Dimitri E.
see Karavasilis, Theodore L., 1698

Best, James L.
see Simmons, Stephen M., 945

Bethapudi, R.
see El Shamy, U., P.E., 32

Beygo, Cem, Ph.D.
see Ozcevik, Ozlem, Ph.D., 1936

Bhandari, Alok
Luminol-Based Enhanced Chemiluminescence Assay for Quantification of Peroxidase and Hydrogen Peroxide in Aqueous Solutions: Effect of Reagent pH and Ionic Strength, 738

Bhandari, Kirti
see Han, Ji, 1926

Bharati, Luna
see Venot, Jean-Philippe, 1267

Bhardwaj, R.
see Carlson, J. D., 1360

Bhargava, Abhishek
Three-Stage Least-Squares Analysis of Time and Cost Overruns in Construction Contracts, 434
see Anastasopoulos, Panagiotis Ch., 403

Bhashyam, Grama
see Liu, Ruijie, 526

Bhasin, Amit
see Caro, Silvia, 1382

Bhat, R. B.
see Sabour, M. H., 41

Bhatia, Shobha, Ph.D.
"If These Women Can Do It, I Can Do It, Too": Building Women Engineering Leaders through Graduate Peer Mentoring, 2076

Bhatia, Shobha K., ed.
see Burns, Susan E., ed., 2276

Bhattacharjee, Bishwajit
see Mitra, Gopal, 1552

Bhattacharya, Devanjan
see Ghosh, Jayanta Kumar, 291

Bhattacharyya, Debraj
Textile Dye Removal in Single-Phase and Two-Phase Anaerobic Biotreatment Systems, 2125
Understanding the Mixing Pattern in an Anaerobic Expanded Granular Sludge Bed Reactor: Effect of Liquid Recirculation, 678

Bhattacharyya, S. K.
see Deb, Arghya, 246

Bhuiyan, Faruk
Bank-Attached Vanes for Bank Erosion Control and Restoration of River Meanders, 1002

Bhunia, Puspendu
Insight into Nitrous Oxide Emissions from Biological Wastewater Treatment and Biosolids Disposal, 2112

Bianchi, Maria Giovanna
see Casula, Giuseppe, 1782

Bianchini, Alessandra
Interrater Reliability of Manual Pavement Distress Evaluations, 1807

Bianco, Vincenzo
New Approach for Modeling the Contribution of NSM FRP Strips for Shear Strengthening of RC Beams, 180

Biegalski, Amy Eitel, P.E.
see Zhou, Y. Edward, P.E., 129

Bielefeldt, Angela
Bacterial Kinetics of Sulfur Oxidizing Bacteria and Their Biodeterioration Rates of Concrete Sewer Pipe Samples, 695

Bigger, Stephen W.
Mathematical Model for the Sequestering of Chemical Contaminants by Magnetic Particles, 750

Biggs, Trent
see Venot, Jean-Philippe, 1267

Bilec, Melissa M.
Life-Cycle Assessment Modeling of Construction Processes for Buildings, 1184

Billington, Sarah L.
see Lee, Won K., P.E., 117

Binda, L.
Nondestructive Testing Evaluation of Drying Process in Flooded Full-Scale Masonry Walls, 1544

Bindiganavile, V.
see Hao, Z., 191

Binienda, Wieslaw K.
Mesomechanical Model for Numerical Study of Two-Dimensional Triaxially Braided Composite, 595

Biolzi, L.
see Wachman, G. S., 777

Biolzi, Luigi
see Cattaneo, Sara, 1437

Birak, Pamela Schultz
see Wright, Deona Johnson, 663

Birgonul, M. Talat
see Isik, Zeynep, 1318
see Ozorhon, Beliz, 1336

Birinci, Fatma
see Bayraktar, Alemdar, 1499

Bisantino, T., Ph.D.
Effect of Time Scale on the Performance of Different Sediment Transport Formulas in a Semiarid Region, 947

Bisby, Luke A., P.E.
see Fitzwilliam, Jason, 204
see Labossière, Pierre, 1587

Bishop, Erik
see Roeder, Charles W., 1757

Bishop, Paul L., P.E.
see Lee, Woo Hyoung, 676

Bishop, Ross
see Sebastian, Wendel, 1761

Bitsikas, Tilemaxos
see Kepaptsoglou, Konstantinos, 1852

Blackard, Ben
see Apipattanavis, Somkiat, 429

Blackbourn, Samuel
see Fassman, Elizabeth A., Ph.D., 1103

Blackhurst, Michael, P.E.
Cost-Effectiveness of Green Roofs, 91

Blackler, Gerald E.
see Guo, James C. Y., 761

Blackman, Ivy Q.
Height and Construction Costs of Residential High-Rise Buildings in Shanghai, 430

Blais, Jean-François
see Mouton, Julia, 728

Blázquez, Antonio
Analytical and Numerical Models of Postbuckling of Orthotropic Symmetric Plates, 589

Blázquez, G.
see Martín-Lara, M. A., 766

Bligh, R.
see Kim, K.-M., 815

Block, Paul
Economic Analysis of Large-Scale Upstream River Basin Development on the Blue Nile in Ethiopia Considering Transient Conditions, Climate Variability, and Climate Change, 1975

Blokker, E. J. M.
Simulating Residential Water Demand with a Stochastic End-Use Model, 1960

Blokker, Mirjam
see Weickgenannt, Martin, 2023

Bloomberg, Michael R.
see Schwarzenegger, Arnold, 2187

Bobée, B., Ph.D.
see El Adlouni, S., Ph.D., 1065

Bobée, Bernard
see Ehsanzadeh, Eghbal, 1143

Bocchi, S.
see Rossi, S., 1224

Boddy, Stefan
Activity Awareness as an Enabler for Communication and Network Building in Construction Design Teams, 301

Bogus, Susan M.
Rank Correlation Method for Evaluating Manual Pavement Distress Data Variability, 1169

Bohn, Jeffrey S.
Benefits and Barriers of Construction Project Monitoring Using High-Resolution Automated Cameras, 377

Boldini, Daniela
see Rotonda, Tatiana, 811

Bolleni, Naveen
see Washer, Glenn, 130

Bolonkin, A. A.
Femtotechnology: Design of the Strongest AB Matter for Aerospace, 69

Bolonkin, Alexander
Railgun Space Launcher, 70

Bondelind, Mia
Setting Up a Numerical Model of a DAF Tank: Turbulence, Geometry, and Bubble Size, 771

Bonelli, Alessio
see Bursi, Oreste S., 596

Bonneau, A.
Water Supply Performance and Fire Suppression during the World Trade Center Disaster, 1190

Bonnefoy, Philippe A.
Evolution and Development of Multiairport Systems: Worldwide Perspective, 1898

Bonneton, Philippe
see Cienfuegos, Rodrigo, 2031

Booker, Aaron J.
see ElGawady, Mohamed, 238

Boominathan, A., Ph.D.
see Chandrasekaran, S. S., 830

Boranyak, Sharon
Archetype, 2168
Capitol Connections, 2189

Bordat, Claire
see Anastasopoulos, Panagiotis Ch., 403

Borello, F.
Structural Uncertainty Effect on Classical Wing Flutter Characteristics, 74

Borges, Ricardo G.
see Oliveira, José R. M. S., 867

Boroomand-Nasab, Saeed
see Albaji, Mohammad, 1213

Borrelli, Rosario
Numerical/Experimental Correlation of a Plasma Wind Tunnel Test on a UHTC-Made Nose Cap of a Reentry Vehicle, 72

Borror, Connie M.
see Laungrungrong, Busaba, 1348

Borst, Michael
see Stander, Emilie K., 1109

Bosch, David D.
see Chin, David A., P.E., 1995

Boschert, Tim
see Schultz, Grant G., Ph.D., P.E., PTOE, 1804

Boschetti, M.
see Rossi, S., 1224

Bose, Purnendu
see Roy, Susmita, 657

Bosiljkov, Vlatko, Ph.D.
Shear Capacity of the Flange-Web Intersections of Brick Masonry Nonrectangular Sections, 1665

Botros, K. K.
Long-Range Facility Planning Based on Dynamic Programming for Optimum Combined Cost and Probability Paths, 1562

Bottasso, Carlo L.
see Zanenga, Erminio, 58

Bouaanani, Najib
Practical Formulas for Frequency Domain Analysis of Earthquake-Induced Dam-Reservoir Interaction, 470

Bouferguene, Ahmed, Ph.D.
see Alex, Dinu Philip, M.Sc., 388

Bourdillon, R.
Modification of the Lake Flow Algorithm of the Distributed Hydrological Model HYDROTEL When Modeling Lakes with Multiple Outlets, 1151

Bourquin, Frédéric
see Basseville, Michèle, 495

Boussaha, Fateh
see Chaallal, Omar, 218

Bousselham, Abdelhak
State of Research on Seismic Retrofit of RC Beam-Column Joints with Externally Bonded FRP, 181
see Chaallal, Omar, 218

Boutilier, Terry
see Bernath Walker, Sean, 1945

Bowers, Barry, P.E.
see Liu, Zhugang "Amos", P.E., 2224

Bowman, Mark
see Parr, Michael J., 127

Boxall, J. B.
see Husband, S., 618
see Mounce, S. R., 1990

Boyd, Glen R., Ph.D., P.E.
see Sever, V. Firat, Ph.D., P.E., 1365

Boyer, Treavor H.
Advances in Modeling Completely Mixed Flow Reactors for Ion Exchange, 736

Boyle, Linda Ng
see Donmez, Birsen, 1831

Boyles, Stephen D.
Optimal Maintenance and Repair Policies under Nonlinear Preferences, 1163

Boynton, Matthew
Improving Engineering Education Outreach in Rural Counties through Engineering Risk Analysis, 1604

Bozorg-Haddad, Amir, Ph.D.
Compressive Creep of Virgin HDPE Using Equivalent Strain Energy Density Method, 1488

Bracci, Joseph M.
see Simon, Jessica, 1733

Brachman, R. W. I.
see Cholewa, J. A., 1570
see Dickinson, S., 828
see Rowe, R. Kerry, 865

Bradford, Andrea
see Denich, Chris, 1108

Bradford, Mark Andrew
see Heidarpour, Amin, 1703
see Pi, Yong-Lin, 553

Braley, Kordel T., E.I.T.
see Schultz, Grant G., Ph.D., P.E., PTOE, 1804

Branco, Federico
see Mauro, Raffaele, 1823

Brandenberg, Scott J.
Weighted Residual Numerical Differentiation Algorithm Applied to Experimental Bending Moment Data, 857
see Coe, Joseph, 906

Brant, Jonathan A.
Pilot-Scale Evaluation of Chemical Cleaning Protocols for Organic and Biologically Fouled Microfiltration Membranes, 674

Brattebo/, Helge
see Ugarelli, Rita, 1174

Bravo, J. M.
see Paz, A. R., 1072

Bray, Jonathan D.
Shear Strength of Municipal Solid Waste, 10
see Dashti, Shideh, 788
see Dashti, Shideh, 864
see Ledezma, Christian, Ph.D., 819
see Zekkos, Dimitrios, 895

Breña, Sergio F.
see Niemitz, Carl W., 194

Brennan, Rachel A.
see Newcombe, Caroline E., 683

Brennan, Thomas M., Ph.D., P.E.
Influence of Vertical Sensor Placement on Data Collection Efficiency from Bluetooth MAC Address Collection Devices, 1907

Brenner, Brian, P.E.
Bridginess: More of the Civil Engineering Life, 2229

Briaud, J.-L.
see Kim, K.-M., 815

Bridge, Russell Q.
see Ernst, Stefan, Ph.D., 1625

Bridgers, Mark
see Rasdorf, William, Ph.D., P.E., 336

Bright, T. M.
Impact of Storm-Water Runoff on Clogging and Fecal Bacteria Reduction in Sand Columns, 772

Brilakis, Ioannis
see Zhu, Zhenhua, 305
see Zhu, Zhenhua, 335

Brill, E. Downey
see Reichold, Laurel, 1996

Brissette, François, Ph.D., P.E., Aff.ASCE
see Minville, Marie, Ph.D., 1997

Brnic, Josip
Structural Steel ASTM A709—Behavior at Uniaxial Tests Conducted at Lowered and Elevated Temperatures, Short-Time Creep Response, and Fracture Toughness Calculation, 567

Broad, D. R.
Optimal Operation of Complex Water Distribution Systems Using Metamodels, 2002

Brocchini, Maurizio
see Lorenzoni, Carlo, 2036

Brockmann, Christian
see Girmscheid, Gerhard, 349

Brooker, Penny
Judging Unreasonable Litigation Behavior at the Interface of Mediation in the English Jurisdiction, 1306

Brookes, J. D.
see Lewis, D. M., 1007

Brooks, Robert, Ph.D., P.E.
see Khoury, Naji N., Ph.D., 1397

Brophy-Price, Jennifer
see LeFevre, Nancy-Jeanne Bachmann, 1237

Brose, William, P.E.
see Klancnik, Fred, P.E., 2200

Brown, David L.
Fatigue and Strength Evaluation of Two Glass Fiber-Reinforced Polymer Bridge Decks, 122
see Berman, Jeffrey W., 1516

Brown, Jim M. B.
see Vardy, Alan E., 990

Brown, Linfield C.
see Palumbo, James E., 741

Brown, Osei
see Frimpong, Samuel, 452

Brown, Robert A.
Impacts of Construction Activity on Bioretention Performance, 1094

Brown, Robert C., Ph.D.
see Li, Ling, Ph.D., 645

Bruce, Richard D.
see Gebken, Richard J., 1594

Bruckermann, Oliver
Structural Design of the DRL-10 Space Pavilion, 88

Bruggeman, Adriana
see Benli, Bogachan, 1282

Bruneau, Joel F.
Water Use Intensities and the Composition of Production in Canada, 1965

Bruneau, Michel
see Cui, Shenlei, 1700
see Pollino, Michael, 1754
see Pollino, Michael, 1755
see Qu, Bing, 1673

Brunone, Bruno, Ph.D.
Wall Shear Stress in Transient Turbulent Pipe Flow by Local Velocity Measurement, 1016

Brunson, L. R.
see Mlilo, T. B., 655

Bryan, R.
see Fisseha, B., 939

Buchanan, Andrew H.
see Newcombe, Michael P., 1750

Buchberger, Steven G.
see Hoffman, Daniel E., 1191

Buckle, Ian G.
see Dusicka, Peter, 1645

Buhler, Russell
Design of Dynamically Wind-Loaded Helical Piers for Small Wind Turbines, 1538

Bui, Thi Thuy Dung
see Ling, Florence Yean Yng, 1596

Bulleit, William M.
see Miller, Joseph F., 1731

Bullock, Darcy M., Ph.D., P.E.
see Brennan, Thomas M., Ph.D., P.E., 1907
see Hubbard, Sarah M. L., 1

Bunker, Jonathan
see Jaiswal, Sumeet, 1915

Buranasing, Rak
see Tangchirapat, Weerachart, 1404

Burch, M. D.
see Lewis, D. M., 1007

Burchell, M. R.
see Bright, T. M., 772

Burdette, Edwin G., P.E.
see Hastings, John S., P.E., 167
see Scoble, Kyle P., 1498

Burgess, Ian W.
see Yu, Chaoming, Ph.D., 1634

Burgueño, Rigoberto
see Li, Zhe, 135

Burke, Christopher
see Ling, Hoe I., 523

Bürki, Beat
see Hirt, Christian, 1766

Burns, Susan E., ed.
Scour and Erosion (GSP 210), 2276

Burris, Mark
see Lipnicky, Kevin, 1899

Bursi, Oreste S.
Linearly Implicit Time Integration Methods for Real-Time Dynamic Substructure Testing, 596

Burt, Charles M.
Canal Seepage Reduction by Soil Compaction, 1252
see Howes, Daniel J., 1269

Burton, Christopher G.
Social Vulnerability and Hurricane Impact Modeling, 2084

Bussière, Yves, Ph.D.
see Torres, Juan, Ph.D., 1948

Bustamante, José
see González, Vicente, 426

Buteau, S.
Permafrost Weakening as a Potential Impact of Climatic Warming, 168

Butler, David
see Fu, Guangtao, 648
see Rozos, Evangelos, 2012

Butterworth, S.
see Hekimoglu, S., 1773

Buttlar, William G.
see Kim, Hyunwook, 1828

Buwanpura, Janaka
Construction Research Congress 2010: Innovation for Reshaping Construction Practice, 2231

Byfield, M. P., Ph.D., C.Eng.
see Mawer, R. W., Ph.D., 816
see Smith, P. P., 1549

Cabral, A. R.
Biocover Performance of Landfill Methane Oxidation: Experimental Results, 702

Cabrera, Enrique
Energy Audit of Water Networks, 2027

Cabrera, Enrique
see Cabrera, Enrique, 2027

Cacciola, M.
see Megali, G., 1442

Cáceres, Iván
Wave and Flow Response to an Artificial Surf Reef: Laboratory Measurements, 973

Cachim, Paulo Barreto
see Negrão, João Henrique Jorge de Oliveira, 1729
see Negrão, João Henrique Jorge de Oliveira, 1730

Caetano, Elsa
see Reynders, Edwin, 527

Cai, C. S., P.E.
see Deng, Lu, 147
see Deng, Lu, 2142

Cai, Jianan
Observations on Sand Jets in Air, 577

Cai, Jun-Feng
see Hsu, Yin-Sung, 949

Cai, Xiang-Rong, Ph.D.
see Xu, Shi-Lang, 1463

Cai, Ximing
see Alcoforado de Moraes, Márcia Maria Guedes, 2009

Cai, Yi
see Jiang, Hongtao, 1493

Cai, Yuanqiang
Vertical Vibrations of a Rigid Foundation Embedded in a Poroelastic Half Space, 497

Caiado, Jorge
Performance of Combined Double Seasonal Univariate Time Series Models for Forecasting Water Demand, 1078

Caldas, Carlos H.
see Gong, Jie, 284

Calder, G. Vincent, Ph.D.
Aluminum Reactions and Problems in Municipal Solid Waste Landfills, 2126

Calero, M.
see Martín-Lara, M. A., 766

Caliendo, Ciro
Stress-Prediction Model for Airport Pavements with Jointed Concrete Slabs, 1859

Callander, Peter
see Ward, Nicholas Dudley, 959

Callisto, L.
Seismic Design of Flexible Cantilevered Retaining Walls, 807

Calvello, Michele
see Cascini, Leonardo, 894

Camanho, Ana S.
see Horta, Isabel M., 372

Camarillo, Mary Kay
Model to Quantify Removal and Inactivation of Microorganisms Occluded in Effluent Wastewater Particles Using Filtration and Disinfection Systems, 739

Camotim, Dinar
see Challamel, Noël, 536

Camp, William M., ed.
see Hussein, Mohamad H., ed., 2226

Campione, G., Ph.D.
see Badalamenti, V., 482

Campisano, A.
RTC of Valves for Leakage Reduction in Water Supply Networks, 1973

Campisano, Alberto
see Creaco, Enrico, 511

Can, Chen
Removal of Heavy Metal Ions by Waste Biomass of *Saccharomyces Cerevisiae*, 619

Canadija, Marko
see Brnic, Josip, 567

Canale, Raymond P.
Phosphorus Budget and Remediation Plan for Big Platte Lake, Michigan, 2017

Canfield, Evan, Ph.D., P.E.
see Stewart, Dave, 1074

Cano-Licona, Jesús
see Tena-Colunga, Arturo, 1659

Canovaro, Francesco
see Forzieri, Giovanni, 1032

Cantisani, Giuseppe
Road Roughness and Whole Body Vibration: Evaluation Tools and Comfort Limits, 1876

Cao, Bing
see Liu, Pan, Ph.D., 1854

Cao, Qixin
see Li, Baoshun, 282

Capilla, J. E.
see Llopis-Albert, C., 1112

Capitão, Silvino Dias, Ph.D.
see Santos, Luís Guilherme de Picado, Ph.D., 1913

Carassale, Luigi
Modeling Nonlinear Systems by Volterra Series, 537

Carbonell, Josep Maria
Modeling of Ground Excavation with the Particle Finite-Element Method, 504

Cardani, G.
see Binda, L., 1544

Cardenas-Lailhacar, Bernard
Sensor-Based Automation of Irrigation on Bermudagrass during Dry Weather Conditions, 1220

Cardno, Catherine A., Ph.D.
A New Approach, 2165

Carlson, J. D.
Determining Thermal Conductivity of Paving Materials Using Cylindrical Sample Geometry, 1360

Carnacina, Iacopo
see Pagliara, Stefano, 1044

Caro, Silvia
Coupled Micromechanical Model of Moisture-Induced Damage in Asphalt Mixtures, 1382
see Arambula, Edith, 1407

Carpenter, Donald D., Ph.D., P.E., LEED AP
Influence of Planting Soil Mix Characteristics on Bioretention Cell Design and Performance, 1096

Carpinteri, A.
Analysis of Snap-Back Instability due to End-Plate Debonding in Strengthened Beams, 479

Carr, Athol J.
see Wotherspoon, Liam M., 139

Carradine, David
see Newcombe, Michael P., 1750

Carradine, David M.
see Graham, Drew A., 1349
see Graham, Drew A., 1609

Carravetta, A.
Assessment of Rheological Characteristics of a Natural Bingham-Plastic Mixture in Turbulent Pipe Flow, 1027

Carrera, E.
Flight Mechanics Analysis of a Motorized Trike with Composite Wing, 66

Carrier, W. David
Ring-Reinforced Pipelines: That Moment of Mystery, 1568

Carrillo Cobo, M. T.
see Pérez Urrestarazu, L., 1253

Carrillo, F. J.
see Duviella, E., 1260

Carroll, Cameron T., P.E.
Wood Materials, Nails, and Sheathing Connections from Early 20th Century Residential Buildings, 1469

Carsana, Maddalena
see Bertolini, Luca, 1411

Casares, José A. G.
see Nieto, Leopoldo M., 757

Casciati, Sara
Response Surface Models to Detect and Localize Distributed Cracks in a Complex Continuum, 572

Cascini, Leonardo
Groundwater Modeling for the Analysis of Active Slow-Moving Landslides, 894

Modeling of Rainfall-Induced Shallow Landslides of the Flow-Type, 782

Casey, Kevin, P.E., ed.
see Senapathi, Sivaji, P.E, ed., 2225

Cassidy, M. J.
see Hodder, M. S., 23

Castellanza, Riccardo
Evaluation and Remediation of an Abandoned Gypsum Mine, 835

Castelli, Fabio
see Forzieri, Giovanni, 1032

Castro-Fresno, Daniel, Ph.D.
see Rodriguez-Hernandez, Jorge, Ph.D., 773

Castro-Orgaz, O.
Critical Depth Relationships in Developing Open-Channel Flow, 960

Castro-Orgaz, Oscar
Energy and Momentum Velocity Coefficients for Calibrating Submerged Sluice Gates in Irrigation Canals, 1268

Velocity Profile and Flow Resistance Models for Developing Chute Flow, 989

Casula, Giuseppe
Detection of Terrain Morphologic Features Using GPS, TLS, and Land Surveys: "Tana della Volpe" Blind Valley Case Study, 1782

Cataño-Lopera, Yovanni A.
Experimental Investigation of a Vortex-Flow Restrictor: Rain-Blocker Performance Tests, 998

Cattaneo, S.
see Piccinin, R., 533

Cattaneo, Sara
Assessment of Thermal Damage in Hybrid Fiber-Reinforced Concrete, 1437

Cawlfield, Jeffrey D., Ph.D., P.E.
see Johnson, Benjamin W., 2113

Cebon, D.
see Ossa, E. A., 1353

Celik, A. O.
see Diplas, P., 1284

Centeno, Jorge Antonio Silva
Two Methods to Estimate the Spot Size of Terrestrial Laser Scanners, 1781

Cerato, Amy B., P.E.
see Buhler, Russell, 1538

Ceroni, Francesca
Evaluation of Bond Strength in Concrete Elements Externally Reinforced with CFRP Sheets and Anchoring Devices, 229

Cerucci, Marcelo, Ph.D.
Comparison of the Monod and Droop Methods for Dynamic Water Quality Simulations, 723
Hydrologic and Water Quality Integration Tool: HydroWAMIT, 11

Cervo, Nicholas M.
Bridge Deck Patching Material Evaluation, 163

Cestino, E.
see Borello, F., 74

Çete, Mehmet
Turkish Land Readjustment: Good Practice in Urban Development, 1958

Cevik, S. Yeliz
see Fernald, Alexander G., 1289

Cha, Woosuk
see Nalinakumari, Brijesh, 652

Chaallal, Omar
Fatigue Performance of RC Beams Strengthened in Shear with CFRP Fabrics, 218

Chabaat, Mohamed
see Hadjab, Hadda, 1473

Chacko, Rose M.
see Lee, Jae Ha, 259

Chahar, Bhagu R.
Optimal Spacing in an Array of Fully Penetrating Ditches for Subsurface Drainage, 1206

Chai, Hua-You
Effects of the Source on Wave Propagation in Pile Integrity Testing, 892

Chakraborty, Arunasis
Analysis of Frequency Nonstationarity via Continuous Wavelet Transform in the Response of Primary-Secondary Systems, 1763

Chakraborty, N.
see Mukherjee, I., 622

Chakraborty, T.
Dilatancy and Shear Strength of Sand at Low Confining Pressures, 825

Chakroborty, Partha
Determining Reliability of an Asphalt Mix Design: Case of Marshall Method, 1791

Challamel, N.
see Zhang, Y. Y., 516

Challamel, Noël
Flexural-Torsional Buckling of Cantilever Strip Beam-Columns with Linearly Varying Depth, 536

Chamorro, Leonardo P.
Channel Bed Slope Effect on the Height of Gravity Waves Produced by a Sudden Downstream Discharge Stoppage, 976

Champagne, Pascale
see Roy-Poirier, Audrey, 710

Chan, Albert P. C.
Critical Success Factors for PPPs in Infrastructure Developments: Chinese Perspective, 363
Potential Obstacles to Successful Implementation of Public-Private Partnerships in Beijing and the Hong Kong Special Administrative Region, 1320
see Chan, Daniel W. M., 364
see Ke, Yongjian, 1198
see Wong, James M. W., 413
see Xu, Yelin, 404

Chan, B. J.
see Steets, J., 1864
see Steets, J., 1865

Chan, Ben Y. B.
see Cheung, Moe M. S., 107

Chan, Chun-Man, Ph.D.
see Zou, Xiao-Kang, Ph.D., 1734

Chan, Daniel W. M.
Empirical Study of the Risks and Difficulties in Implementing Guaranteed Maximum Price and Target Cost Contracts in Construction, 364
see Chan, Albert P. C., 363
see Chan, Albert P. C., 1320

Chan, Ho Wai
see Cheung, Sai On, 365

Chan, I-Chi
see Lian, Yanqing, 1119

Chan, S. H.
see Wong, S. C., 1815

Chan, Tsz-Ying
see Zou, Patrick X. W., 400

Chan, Yee-Shan
see Leung, Mei-yung, 423
see Leung, Mei-yung, 442

Chandra, Satish
see Laxman, Kotkar Kishor, 1919
see Sharma, Vishal, 1481

Chandramouli, P. N.
see Prasad, K. S. Hari, 1283

Chandrasekaran, S. S.
Group Interaction Effects on Laterally Loaded Piles in Clay, 830

Chang, Barbara J.
see Olsen, Michael J., 285

Chang, Byungik
Time-Domain Model for Predicting Aerodynamic Loads on a Slender Support Structure for Fatigue Design, 531

Chang, C. C.
Nonlinear Identification of Lumped-Mass Buildings Using Empirical Mode Decomposition and Incomplete Measurement, 486
Three-Dimensional Structural Translation and Rotation Measurement Using Monocular Videogrammetry, 540

Chang, C. K.
see Julien, P. Y., 969

Chang, Ching S.
Micromechanical Modeling for Inherent Anisotropy in Granular Materials, 539
Modeling Stress-Dilatancy for Sand under Compression and Extension Loading Conditions, 535

Chang, Kuo-Chun
see Ou, Yu-Chen, 1632

Chang, Liang-Cheng
Applying Multiobjective Genetic Algorithm to Analyze the Conflict among Different Water Use Sectors during Drought Period, 2013
see Chu, Hone-Jay, 1118

Chang, Luh-Maan
see Chen, Po-Han, 297

Chang, Ni-Bin, ed.
Effects of Urbanization on Groundwater: An Engineering Case-Based Approach for Sustainable Development, 2239

Chang, Ray C.
Stability Characteristics for Transport Aircraft Response to Clear-Air Turbulence, 61

Chang, Shih-Hsien
see Chou, Jing-Dong, 621

Chang, Shoou-Yuh
Extended Kalman Filtering to Improve the Accuracy of a Subsurface Contaminant Transport Model, 664

Chang, Shu-Chun
Ecological Corridor in the Urban Area: Case Study in Kaohsiung City, Taiwan, 2103

Chang, Shuenn-Yih
Experimental Studies of Reinforced Concrete Bridge Columns under Axial Load Plus Biaxial Bending, 1607
Explicit Pseudodynamic Algorithm with Improved Stability Properties, 519

Chang, Ta-Peng, Ph.D.
see Sun, Yung-Ming, Ph.D., 1477

Chang, Yanjun
Effect of Cocontaminants on the Remediation of PCB-Impacted Soils by Hydrogen Peroxide, 2127

Chang, Ying
see Shao, Xudong, 1716

Chan-Hilton, Amy
see Nicklow, John, 2001

Chanson, Hubert
Undular Tidal Bores: Basic Theory and Free-Surface Characteristics, 1041
Unsteady Turbulence in Tidal Bores: Effects of Bed Roughness, 2051

Chanton, Jeffery, Ph.D.
see Xu, Qiyong, Ph.D., P.E., 2118

Chapman, David P., P.E.
see Scoble, Kyle P., 1498

Charbeneau, Randall J.
see Jeong, Jaehak, 1020
see Klenzendorf, J. Brandon, 1156
see Takamatsu, Masatsugu, 672

Charbonnaud, P.
see Duviella, E., 1260

Charney, Finley A., Ph.D., P.E.
Seismic Loads: Guide to the Seismic Load Provisions of ASCE 7-05, 2277

Chasco, Fco. de Asís Ramírez
Engineering in the Service of Law, 1301

Chase, Mike J.
see Thoma, Eben D., 700

Chasey, Allan
see Patel, Alpeshkumar, 1580

Chattopadhyay, Sandip
see Randall, Paul M., 639

Chaturvedi, Meha
see Goyal, Radha, 2123

Chau, K. T.
see Cheng, Y. M., 899

Chaudhuri, Susanta
see Debnath, Koustuv, 1003

Chazallon, Cyrille
see Allou, Fatima, 600

Che, Guang-Jie
see Zhao, Hong-Ming, 1841

Chebana, F., Ph.D.
see El Adlouni, S., Ph.D., 1065

Chen, Albert Y.
see Peña-Mora, Feniosky, 289

Chen, Anthony
L_1-Norm Path Flow Estimator for Handling Traffic Count Inconsistencies: Formulation and Solution Algorithm, 1848

Chen, Bao-guo, Ph.D.
Experimental Study and Numerical Simulation on Concrete Box Culverts in Trenches, 1517

Chen, C. Y.
see Kao, C. M., 615

Chen, Carl W.
Simulating the Effect of Sulfate Addition on Methylmercury Output from a Wetland, 651

Chen, Cheng
Modeling Permanent Deformation of Unbound Granular Materials under Repeated Loads, 37
Stability Analysis of Direct Integration Algorithms Applied to MDOF Nonlinear Structural Dynamics, 508
Tracking Error-Based Servohydraulic Actuator Adaptive Compensation for Real-Time Hybrid Simulation, 1651

Chen, Ching-Tien
see Chen, Lu-Hsien, 1117

Chen, Chuanyao
see Ye, Yong, 503

Chen, Dar Hao, Ph.D., P.E.
Inspection and Condition Assessment Using Ground Penetrating Radar, 793

Chen, Dar-Hao, Ph.D., P.E.
Slippage Failure of a New Hot-Mix Asphalt Overlay, 1521
Utilizing Advanced Characterization Tools to Prevent Reflective Cracking, 1535
see Wang, Rongxia, 1534

Chen, Don
Effects of Recycled Materials on Long-Term Performance of Cold In-Place Recycled Asphalt Roads, 1523
see Kim, Jungyong "Joe", 1522

Chen, Dong
Sensitivity Analysis of Nonequilibrium Adaptation Parameters for Modeling Mining-Pit Migration, 1025

Chen, F.
see Song, Z. W., 1226

Chen, Fangliang
Electromechanical Behavior of Interface Deformable Piezoelectric Bilayer Beams, 500
see Qiao, Pizhong, P.E., 514

Chen, Feng
see Chen, Suren, P.E., 1822

Chen, G.
see Tuutijärvi, T., 712

Chen, G. M.
Interaction between Steel Stirrups and Shear-Strengthening FRP Strips in RC Beams, 227

Chen, Gang
see Yang, Zhongzhen, 1883

Chen, Hongyu
see Huang, Teng, 1769

Chen, Hongyun
see Liu, Pan, Ph.D., 1854

Chen, How-Ji
Dynamic Properties of Lightweight Concrete Beams Made by Sedimentary Lightweight Aggregate, 1408

Chen, Hung-Yu
see Chang, Shu-Chun, 2103

Chen, I.-Hong, Ph.D.
see Václavek, Leo, 2136

Chen, J. F.
Effect of Geometric Discontinuities on Strains in FRP-Wrapped Columns, 189
see Chen, G. M., 227

Chen, Jieh-Haur
Application of a SOM-Based Optimization Algorithm in Minimizing Construction Time for Secant Pile Wall, 432

Chen, Jing, Ph.D.
see Yuan, Songhu, Ph.D., 719

Chen, Jingsong
see Huang, Baoshan, 1468

Chen, Li
Modeling Strength of High-Performance Concrete Using an Improved Grammatical Evolution Combined with Macrogenetic Algorithm, 287

Chen, Li-Hsien
see Lin, Lee-Kuo, 1357

Chen, Li-Wen
see Liao, Tsai-Yun, 1897

Chen, Lu-Hsien
Groundwater Level Prediction Using SOM-RBFN Multisite Model, 1117

Chen, Po-Han
Box-and-Ellipse-Based ANFIS for Bridge Coating Assessment, 297

Chen, Qian
Object Model Framework for Interface Modeling and IT-Oriented Interface Management, 333

Chen, Qiang
see Sang, Xuefeng, 1201

Chen, Qin
see Wu, Chin H., 2039

Chen, R. P.
Field Tests on Pile-Supported Embankments over Soft Ground, 850

Chen, Roger H. L.
see Lin, Lee-Kuo, 1357

Chen, S.
see Stone, A., 2153

Chen, S. R., P.E.
Dynamic Performance Simulation of Long-Span Bridge under Combined Loads of Stochastic Traffic and Wind, 115

Chen, Shen-en, ed.
Forensic Engineering 2009: Pathology of the Built Environment, 2245

Chen, Shen-En, Ph.D.; P.E., ed.
Indo-U.S. Forensic Practices: Investigation Techniques and Technology, 2260
see Dai, Kaoshan, 1500
see Dai, Kaoshan, 1501
see Natarajan, C., 1524

Chen, Sheng-hong
Block Element Method for the Seismic Stability of Rock Slopes, 930

Chen, Suren, P.E.
Simulation-Based Assessment of Vehicle Safety Behavior under Hazardous Driving Conditions, 1822

Chen, Tao
see Gong, Yongwei, Ph.D., 1161

Chen, Wei-Hsiang
Disposal of Arsenic-Laden Adsorptive Media: Economic Analysis for California, 730

Chen, Wuyi
see Liu, Ning, Ph.D., 1037

Chen, Xi
see Shi, Peng, 1093

Chen, Xiaoli, Ph.D.
Sediment Transport on Arbitrary Slopes: Simplified Model, 974

Chen, Xinzhong
Estimation of Probabilistic Extreme Wind Load Effects: Combination of Aerodynamic and Wind Climate Data, 532

Chen, Xuewu
see Yang, Min, Ph.D., 1874

Chen, Xumei
Microscopic Traffic Simulation Approach to the Capacity Impact Analysis of Weaving Sections for the Exclusive Bus Lanes on an Urban Expressway, 1885

Chen, Y.
Analysis of Tall Buildings with Damped Outriggers, 1747

Chen, Y. M.
see Chen, R. P., 850

Chen, Yali, Ph.D.
Interactive Process of Microsimulation and Logistic Regression for Short-Term Work Zone Traffic Diversion, 1816

Chen, Yi-Jao
see Yeh, Ta-Kang, 1771

Chen, Ying
see Zou, Patrick X. W., 400

Chen, Yit-Jin
Evaluation of Lateral Interpretation Criteria for Drilled Shaft Capacity, 885

Chen, Yunmin
Secondary Compression of Municipal Solid Wastes and a Compression Model for Predicting Settlement of Municipal Solid Waste Landfills, 843

Chen, Yun-Min
see Zhou, Yan-Guo, 789

Chen, Yu-Wen
see Chang, Liang-Cheng, 2013

Chen, Z.
see Agrawal, A. K., 134

Chen, Z. Q.
see Zhang, Z. T., 155

Chen, Zhang
see Zhang, Xin, 984

Chen, Zhangfusheng
Behavior of Concrete in Water Subjected to Dynamic Triaxial Compression, 496

Chen, Zuyu, Ph.D.
see Liu, Ning, Ph.D., 1037

Cheng, Eddie W. L.
see Chiang, Y. H., 395

Cheng, J. J. R.
see Hao, Z., 191

Cheng, J. J. Roger
see Lam, Angus C. C., 254

Cheng, Lijuan
Unreinforced Concrete Masonry Walls Strengthened with CFRP Sheets and Strips under Pendulum Impact, 252

Cheng, Li-Lin
Treatment of Mixture of Sewage and Partially Treated Swine Wastewater by a Combination of UASB and Constructed Wetlands, 2122

Cheng, Min-Yuan
Shear Strength and Drift Capacity of Fiber-Reinforced Concrete Slab-Column Connections Subjected to Biaxial Displacements, 1714

Cheng, Wen-Chieh, Ph.D.
see Ni, James C., 35

Cheng, Y. M.
Evaluation of Interslice Force Function and Discussion on Convergence in Slope Stability Analysis by the Lower Bound Method, 883
Flow Pattern for a Silo with Two Layers of Materials with Single or Double Openings, 899

Chengmou, Fan
see Songlai, Chen, 1687

Cheung, Esther
see Chan, Albert P. C., 363
see Chan, Albert P. C., 1320

Cheung, Moe M. S.
Operational Requirements for Long-Span Bridges under Strong Wind Events, 107

Cheung, Sai On
Construction Mediation Landscape in the Civil Justice System in Hong Kong, 1308
Exploring the Potential for Predicting Project Dispute Resolution Satisfaction Using Logistic Regression, 365

Chi, C.
see Aubeny, C. P., 780

Chi, Fengxia
see Zou, Guilian, 1433

Chi, Shouqian
see Liu, Lichen, 1956

Chia-Chun, Ho, Ph.D.
see Cyril, Guidoux, Ph.D., 846

Chiaia, B. M.
see Masoero, E., 556

Chiang, Hsiao-Wei D.
Combined Cycle Power Augmentation by Overspray Inlet Fogging, 448

Chiang, Y. H.
Employing the Net Present Value-Consistent IRR Methods for PFI Contracts, 395
see Wong, James M. W., 413

Chiariello, Andrea, Ph.D.
see Asprone, Domenico, Ph.D., 239

Chien, C. C.
see Kao, C. M., 615

Chien, H. Y.
Clean up of Petroleum-Hydrocarbon Contaminated Soils Using Enhanced Bioremediation System: Laboratory Feasibility Study, 681
see Kao, C. M., 615

Chien, Steven I-Jy
see Kim, Kitae, 1890

Chikyala, Vivek
see Puppala, Anand J., Ph.D., P.E., 1446

Chilukuri, Venkat
see Sun, Carlos C., P.E., 1912

Chin, David A., P.E.
Enhanced Estimation of Terrestrial Loadings for TMDLs: Normalization Approach, 1995
Lake Effect in Wellhead Protection, 2000
Linking Pathogen Sources to Water Quality in Small Urban Streams, 637

Chin, Joannie
Thermoviscoelastic Analysis and Creep Testing of Ambient Temperature Cure Epoxies Used in Adhesive Anchor Applications, 1460

Chindaprasirt, Prinya
see Rukzon, Sumrerng, 1368

Ching, Jianye
Observations on Limit Equilibrium–Based Slope Reliability Problems with Inclined Weak Seams, 581

Chinowsky, Paul S.
Adaptive Climate Response Cost Models for Infrastructure, 1181
Project Organizations as Social Networks, 359

Chintakayala, Phani Kumar
Modeling Generalized Cost of Travel and Its Application for Improvement of Taxies in Kolkata, 1921

Chiu, Abraham C. F.
State Boundary Surfaces for an Aged Compacted Clay, 897

Chiu, Ho-Ming
see Shen, Shihui, 1438

Chiu, Yung-Chia
Optimal Pump and Recharge Management Model for Nitrate Removal in the Warren Groundwater Basin, California, 1989

Chmilar, B.
see Botros, K. K., 1562

Cho, Dong-Woo
New Parameter to Evaluate Moisture Damage of Asphalt-Aggregate Bond in Using Dynamic Shear Rheometer, 1370

Cho, Hyun-Chong
see Kennedy, Andrew B., 2033

Cho, Kyuman
Integrated Schedule and Cost Model for Repetitive Construction Process, 1325

Cho, KyuMan
Partnering Process Model for Public-Sector Fast-Track Design-Build Projects in Korea, 1319

Cho, Sang-Won
see Jung, Hyung-Jo, 484

Cho, Sung Eun, Ph.D.
Probabilistic Assessment of Slope Stability That Considers the Spatial Variability of Soil Properties, 870

Cho, Wanjei
Stress-Strain Responses of Block Samples of Compressible Chicago Glacial Clays, 790

Cho, Yong-Sik
see Kim, Hyung-Jun, 498

Choe, Do-Eun
Fragility Increment Functions for Deteriorating Reinforced Concrete Bridge Columns, 554

Choi, In-Rak
Hysteresis Model of Thin Infill Plate for Cyclic Nonlinear Analysis of Steel Plate Shear Walls, 1746

Choi, Jae Woong
New Layer-Moduli Back-Calculation Method Based on the Constrained Extended Kalman Filter, 1790

Choi, K. K.
Analytical Studies of Concrete-Filled Circular Steel Tubes under Axial Compression, 1664

Choi, Kang-Kyu
Analytical Model of Circular CFRP Confined Concrete-Filled Steel Tubular Columns under Axial Compression, 188

Choi, Kyoung-Kyu
Numerical Investigation of Creep Effects on FRP-Strengthened RC Beams, 256

Cholewa, J. A.
Effectiveness of Viscoelastic Models for Prediction of Tensile Axial Strains during Cyclic Loading of High-Density Polyethylene Pipe, 1570

Chong, Alice Ming Lin
see Leung, Mei-yung, 442

Choon, Leong Eng
see Guan, Goh Shin, 832

Choong, Thomas S. Y.
see El-Harbawi, Mohanad, 2106

Chootinan, Piya
see Chen, Anthony, 1848

Chopard, B.
see Marcou, O., 1288

Chopra, Manoj
Effect of Rejuvenation Methods on the Infiltration Rates of Pervious Concrete Pavements, 1098

Choquette, Yves
see Morse, Brian, 963

Chou, Chien-Cheng
Collection and Analysis of Critical Infrastructure Interdependency Relationships, 311

Chou, Chih-Sheng
Simulation-Based Secondary Incident Filtering Method, 1868

Chou, Jing-Dong
Study on Pb and PAHs Emission Levels of Heavy Metals- and PAHs-Contaminated Soil during Thermal Treatment Process, 621

Chou, Katie F.
see Kim, Hyunwook, 1828

Chou, Ming-Shean
see Cheng, Li-Lin, 2122

Choudhary, Rajan
see Sharma, Vishal, 1481

Choudhury, Deepankar
see Ahmad, Syed Mohd., 16

Chouskey, Sandeep K.
see Sivakumar Babu, G. L., 2110

Chowdhury, Nabin, Ph.D.
Effect of Dynamic Loading on Biological Nutrient Removal in a Pilot-Scale Liquid-Solid Circulating Fluidized Bed Bioreactor, 713

Chowdhury, Rudaba
see Hu, Yafei, 1581

Christ, Martin
Laboratory Observation of the Response of a Buried Pipeline to Freezing Rubber-Sand Backfill, 1449

Christian, Jason
see Fang, Zheng, 2020

Christie, David
see Indraratna, Buddhima, 863
see Wilkinson, Alex, 915

Christodoulatos, Christos
see Chrysochoou, Maria, 823

Christodoulou, Symeon
Scheduling Resource-Constrained Projects with Ant Colony Optimization Artificial Agents, 266

Christodoulou, Symeon E.
Minimum Moment Method for Resource Leveling Using Entropy Maximization, 366
Pipe Routing through Ant Colony Optimization, 1178
Traffic Modeling and College-Bus Routing Using Entropy Maximization, 1800

Christovasilis, Ioannis P.
see Filiatrault, Andre, 1631

Christudason, Alice
Controversial Strata Legislation: Catalyst for Housing Regeneration in Singapore, 1299

Chromá, Markéta
see Vořechovská, Dita, 1553

Chrostowski, P.
see Koc, W., 1902

Chrysochoou, Maria
Importance of Mineralogy in the Geoenvironmental Characterization and Treatment of Chromite Ore Processing Residue, 823
Stabilized Dredged Material. III: Mineralogical Perspective, 877
see Grubb, Dennis G., 875
see Grubb, Dennis G., 876

Chu, Angus
see He, Jianxun, 745

Chu, Hone-Jay
Optimizing Capacity-Expansion Planning of Groundwater Supply System between Cost and Subsidence, 1118

Chu, Xuefeng
see Fu, Xiang, 1122

Chua, D. K. H.
see Goh, Y. M., 331
see Hossain, Md. Aslam, 303

Chua, David K. H.
Quantification of Spatial Temporal Congestion in Four-Dimensional Computer-Aided Design, 378

Chuanqing, Shao
see Lixin, Yi, 2081

Chucheepsakul, Somchai
see Jongpradist, Pornkasem, 1345

Chui, Ka Wah (Calvin), P.E.
Comparison of Contract General Conditions between United States and China, 89

Chung, Jae H.
Finite-Element Analysis of Fluid-Structure Interaction in a Blast-Resistant Window System, 1636

Chung, S. G., Ph.D.
Smear Effect and Well Resistance of PVD-Installed Ground Based on the Hyperbolic Method, 836

Chung, W. H.
Theory-Based SCS-CN Method and Its Applications, 1159

Chung, Yi-Da
see Yeh, Ta-Kang, 1771

Chung, Yu-Lin
Seismic Resistance Capacity of High-Rise Buildings Subjected to Long-Period Ground Motions: E-Defense Shaking Table Test, 1670

Church, Richard L.
see Repolho, Hugo M., 1892

Cicogna, Marcelo A., Ph.D.
see Hidalgo, Ieda G., Ph.D., 456

Cienfuegos, R.
see Mignot, E., 952

Cienfuegos, Rodrigo
Wave-Breaking Model for Boussinesq-Type Equations Including Roller Effects in the Mass Conservation Equation, 2031

Cinicioglu, S. Feyza
see Kelesoglu, M. Kubilay, 806

Ciolko, Adrian T.
see Mehrabi, Armin B., 128

Cirillo, Cinzia
Forecasting Cybercar Use for Airport Ground Access: Case Study at Baltimore Washington International Airport, 1938

Clarke, P. J.
see Ragheb, A. E., 1775

Clarke, T. R.
see French, A. N., 1225

Clauson, Milo
see Carroll, Cameron T., P.E., 1469

Cleall, Peter John
see Li, Yu-Chao, 923

Clemmens, A. J.
Application of Software for Automatic Canal Management (SacMan) to the WM Lateral Canal, 1249
Downstream-Water-Level Control Test Results on the WM Lateral Canal, 1250
Routing Demand Changes to Users on the WM Lateral Canal with SacMan, 1251
see Bautista, E., 1276
see van Overloop, P. J., 1281

Clemmens, Albert J., P.E.
see Perea, Hugo, 1241

Clifford, N. J.
Numerical Modeling of River Flow for Ecohydraulic Applications: Some Experiences with Velocity Characterization in Field and Simulated Data, 1050

Cline, Daren B. H., Ph.D.
see Kim, Young Hoon, Ph.D., 1705

Clouston, Peggi L.
see Arwade, Sanjay R., 499

Cobacho, Ricardo
see Cabrera, Enrique, 2027

Coe, Joseph
p-Wave Reflection Imaging of Submerged Soil Models Using Ultrasound, 906

Coelho, Paulo A. L. F.
see Oliveira, Paulo J. Venda, 778

Coffelt, Donald P.
Inspection, Condition Assessment, and Management Decisions for Commercial Roof Systems, 86
Life-Cycle Costs of Commercial Roof Systems, 79

Coffman, Bradley F.
Wind Effects on Low-Rise Metal Buildings: Database-Assisted Design versus ASCE 7-05 Standard Estimates, 1681

Cohen, Harry
see Fu, G., 2129

Cohen, J, P.E.
An Honorable Effort, 2221

Colajanni, Piero
see Spinella, Nino, 1647

Colasanti, Regis J., P.E.
Practical Subgrade Model for Improved Soil-Structure Interaction Analysis: Software Implementation, 2157

Colby, Jeffrey D.
Flood Modeling in the Coastal Plains and Mountains: Analysis of Terrain Resolution, 2079

Coleman, Stephen
see Tregnaghi, Matteo, Ph.D., 964

Collin, P.
see White, H., 2150

Collins, Frank G.
Capillary Shape: Influence on Water Transport within Unsaturated Alkali Activated Slag Concrete, 1369

Collins, Kelly A.
Side-by-Side Comparison of Nitrogen Species Removal for Four Types of Permeable Pavement and Standard Asphalt in Eastern North Carolina, 1107

Collins, Michael P.
see Bentz, Evan C., 240

Collischonn, W.
see Paz, A. R., 1072

Colosi, Lisa M.
see Ottmar, Karl J., P.E., 638

Colwell, Arthur B., P.E.
Innovation in Ingleside, 2195

Comert, M.
Explosion Performance of a Ball Powder Production Facility, 1528

Cong, P. C.
Preimpact Configuration Analysis of Dual-Arm Space Manipulator Capturing Object, 52

Connor, Robert J.
see Higgins, Christopher, 149
see Parr, Michael J., 127
see Warpinski, Margaret K., 1639

Consolazio, Gary R.
see Chung, Jae H., 1636

Consoli, Nilo Cesar, Ph.D.
Parameters Controlling Tensile and Compressive Strength of Artificially Cemented Sand, 849
see Silva dos Santos, Ana Paula, D.Sc., 861

Constantinescu, G.
see Zeng, J., 1000

Constantinou, Michael C.
see Kalpakidis, Ioannis V., 1657

Conte, J. P.
see Barbato, M., 1738
see Luco, J. E., 1656

Conte, Joel P.
see Barbato, Michele, 597
see Fraser, Michael, 263

Cook, Jason J.
see Thal, Alfred E., 431

Coonrod, Julie
see Ho, Jungseok, 968

Coop, Matthew Richard, D.Phil.
see Silva dos Santos, Ana Paula, D.Sc., 861

Cooper, Grahame
see Boddy, Stefan, 301

Copping, Alex
see Powell, Ronald, 422

Coppola, Emery A.
see Behzad, Mohsen, 299

Córcoles, J. I.
see Moreno, M. A., Ph.D., 1246

Coronado, Carlos A.
Numerical Modeling of Concrete-FRP Debonding Using a Crack Band Approach, 178

Corrêa, Albertina X. R.
Use of Ozone-Photocatalytic Oxidation (O_3/UV/TiO_2) and Biological Remediation for Treatment of Produced Water from Petroleum Refineries, 613

Corvaro, Sara
see Lorenzoni, Carlo, 2036

Cosatto, C.
see Carrera, E., 66

Cosenza, E.
see Di Ludovico, M., 228

Cossitt, Karen
see Hu, Yafei, 1581

Coulbourne, William L., P.E.
see Mehta, Kishor C., Ph.D., P.E., 2294

Cousin, Patrice
see Robert, Mathieu, 212

Cousins, Thomas E.
see Dymond, Benjamin Z., 152

Cousins, Tommy
see Harris, Devin K., 159

Covas, Dídia
Case Studies of Leak Detection and Location in Water Pipe Systems by Inverse Transient Analysis, 1984

Cox, Chris D.
see Huo, Jinsheng, 661

Cox, Daniel T.
see Suzuki, Takayuki, Ph.D., 2059

Craig, Paul M.
see Xia, Meng, 725

Cramer, Steven M.
see Battaglia, Irene K., 1380
see Muñoz, Jose F., 1350

Crandell, Jay H., P.E.
Below-Ground Performance of Rigid Polystyrene Foam Insulation: Review of Effective Thermal Resistivity Values Used in ASCE Standard 32-01—Design and Construction of Frost-Protected Shallow Foundations, 170

Crapper, Martin, Ph.D.
see Jewers, Sam, 1598

Creaco, E.
see Campisano, A., 1973

Creaco, Enrico
Head Reconstruction Method to Balance Flux and Source Terms in Shallow Water Equations, 511

Creedy, Garry D.
Evaluation of Risk Factors Leading to Cost Overrun in Delivery of Highway Construction Projects, 367

Črnjarić-Žic, Nelida
see Škifić, Jerko, 993

Crochet, Ludivine M., M.Sc.
see Kolehmainen, Reija E., Ph.D., 682

Cruise, J. F.
see Al-Hamdan, O. Z., 1089

Cruz, Rodrigo Caberlon, D.Sc.
see Consoli, Nilo Cesar, Ph.D., 849

Cruzado, Ivette
Factors Affecting Driver Speed Choice along Two-Lane Rural Highway Transition Zones, 1869

Cui, Bo
see Prevatt, David O., P.E., 1722

Cui, C.
Analytical Model for Circular Normal- and High-Strength Concrete Columns Confined with FRP, 233
Experimental Study of Normal- and High-Strength Concrete Confined with Fiber-Reinforced Polymers, 232

Cui, Qingbin
Determinants of Industry Acceptance for Highway Warranty Contracts: Alabama Case Study, 1172
see Ossman, George, 1323

Cui, Shenlei
Behavior of Bidirectional Spring Unit in Isolated Floor Systems, 1700

Cui, Xin-zhuang
Dynamic Numerical Analysis of Antimoisture-Damage Mechanism of Permeable Pavement Base, 36

Culver, Teresa B.
see Baker, Rachel A., 1132

Cunha, Maria da Conceição
Robust Design of Water Distribution Networks for a Proactive Risk Management, 1982

Cunha, Vítor M. C. F.
Pullout Behavior of Steel Fibers in Self-Compacting Concrete, 1340

Cuomo, Sabatino
see Cascini, Leonardo, 782

Currie, Graham
see Mazloumi, Ehsan, 1855

Curriero, Frank C.
see Murphy, Rebecca R., 627

Curtis, Robert
see Subramaniam, Kolluru V., 105

Cuthbertson, Alan J. S.
Deposition from Particle-Laden, Plane, Turbulent, Buoyant Jets, 5

Cyril, Guidoux, Ph.D.
Contact Erosion at the Interface between Granular Coarse Soil and Various Base Soils under Tangential Flow Condition, 846

Czaderski, Christoph
Front and Side View Image Correlation Measurements on FRP to Concrete Pull-Off Bond Tests, 222

Da Costa, Jorge Moreira
see Horta, Isabel M., 372

da Fontoura Costa, Luciano
see de Gouveia, Lilian Tais, 308

da Porto, Francesca
In-Plane Behavior of Clay Masonry Walls: Experimental Testing and Finite-Element Modeling, 1742

Daccache, A.
Assessing Pressure Changes in an On-Demand Water Distribution System on Drip Irrigation Performance—Case Study in Italy, 1229

Dafalias, Yannis F.
see Plesek, Jiri, 507
see Taiebat, Mahdi, 29

Dagher, Habib J., P.E.
see Alvarez-Valencia, Daniel, 1484

Dai, Albert
Energy Dissipative Plunging Flows, 996
Modified Thermal Theory for Gravity Currents on Sloping Boundaries, 1028

Dai, Chun-Fang
see Liu, Jian, Ph.D., 1352

Dai, Fei
Assessing the Accuracy of Applying Photogrammetry to Take Geometric Measurements on Building Products, 339

Dai, Jian-Guo
Experimental Investigation of the Influence of Moisture on the Bond Behavior of FRP to Concrete Interfaces, 258

Dai, Kaoshan
Blast Limits for Transmission Structures. I: Response Spectra Development, 1500
Blast Limits for Transmission Structures. II: Structural Response and Blast Limit Development, 1501

Dai, Qingli
Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach, 1410

Dainty, Andrew R. J.
see Kheni, Nongiba A., 424

Dale, Andrew
see Josse, Juan, 2212

Daly, William H.
see Elseifi, Mostafa A., 1490

D'Ambra, Claudio
see Di Ludovico, Marco, 235

Damnjanovic, Ivan
see Kim, Seok, 1187

Damnjanovic, Ivan D.
see Deshpande, Vighnesh P., 1851

Dancey, C. L.
see Diplas, P., 1284

Dandy, G. C.
see Broad, D. R., 2002
see Gibbs, M. S., 1988

Dandy, Graeme C.
see Gibbs, Matthew S., 2008

Dang, H. K.
Algorithm to Generate a Discrete Element Specimen with Predefined Properties, 20

Dang, Huyen T.
Evaluation of Apparatus for Membrane Cleaning Tests, 740

Daniel, Uzi
see Brant, Jonathan A., 674

Dao, D. V., Ph.D.
see Forth, J. P., 1362

Dao, Thang N.
Methodology for Wind-Driven Rainwater Intrusion Fragilities for Light-Frame Wood Roof Systems, 1676

Daouadji, A.
Instability in Granular Materials: Experimental Evidence of Diffuse Mode of Failure for Loose Sands, 517

Darama, Huseyin, Ph.D.
see Zekioglu, Atila, P.E., 2191

Darbandi, S. M.
Buckling of Variable Section Columns under Axial Loading, 506

Darby, Jeannie L.
see Camarillo, Mary Kay, 739
see Chen, Wei-Hsiang, 730

Dargush, Gary F.
see Ballantyne, Graeme J., 1621

Darve, F.
see Daouadji, A., 517

Darve, Félix
see Wan, Richard, 518

Das, Animesh
see Chakroborty, Partha, 1791

Das, Samir K.
see Bansal, Rajeev K., 1147

Dasaka, S. M.
see Zhang, L. M., 917

Dash, Sujit Kumar
Influence of Relative Density of Soil on Performance of Geocell-Reinforced Sand Foundations, 1400

Dashti, Shideh
Centrifuge Testing to Evaluate and Mitigate Liquefaction-Induced Building Settlement Mechanisms, 864
Mechanisms of Seismically Induced Settlement of Buildings with Shallow Foundations on Liquefiable Soil, 788

Dastidar, Aniruddha
Kinetics of Arsenite Oxidation by Chemoautotrophic *Thiomonas arsenivorans* Strain b6 in a Continuous Stirred Tank Reactor, 735

Datta, Bithin
see Dhar, Anirban, 1967

Datta, S.
see Saha, Papita, 769

Datta, Tania
Evidence and Long-Term Feasibility of Enhanced Biological Phosphorus Removal in Oxidation-Ditch Type of Aerated-Anoxic Activated Sludge Systems, 748

Dave, Bhargav A.
see Sacks, Rafael, 411

Davids, William G., P.E.
Field-Measured Response of an Integral Abutment Bridge with Short Steel H-Piles, 97
see Alvarez-Valencia, Daniel, 1484

Davies, Peter A.
see Cuthbertson, Alan J. S., 5

d'Avila, Maria Paola Santisi
see Schulz, Mauro, 1690

Davis, Allen P.
see Natarajan, Poornima, 671

Davis, B. W.
see Parnell, R., 1671

Davis, C., P.E.
Earthquake Prediction and Disaster Preparedness: Interactive Analysis, 2095

Davis, Peter
see Love, Peter E. D., 342

Davis, Peter R., Ph.D.
see Lopez, Robert, 1536
see Love, Peter E. D., 409
see Love, Peter E. D., 1603

Dawod, Gomaa M.
Evaluation and Adaptation of the EGM2008 Geopotential Model along the Northern Nile Valley, Egypt: Case Study, 1770

Dawood, Haitham M.
see ElGawady, Mohamed, 238

Day, Christopher M., Ph.D.
see Brennan, Thomas M., Ph.D., P.E., 1907

de Alba, Pedro
see Ray, Ram L., 914

de Béjar, Luis A.
Hydrodynamic Forces on Spillway Torque-Tube Gates, 1013
Time-Domain Hydrodynamic Forces on Rigid Dams with Reservoir Bottom Absorption of Energy, 585

de Brito, J.
see Flores-Colen, I., 1529
see Silva, J., 1366
see Silvestre, J. Dinis, 1344

de Fátima Vieira, Rosilene
Influence of Bracings on the Stability of Columns, 2154

de Gouveia, Lilian Tais
Multiscale Curvature Analysis of Asphaltic Aggregate Particles, 308

de la Garza, Jesús M.
see Ozbek, Mehmet Egemen, 1164
see Ozbek, Mehmet Egemen, 1165

de los Reyes, F. L.
see Bright, T. M., 772

de Neufville, Richard
see Bonnefoy, Philippe A., 1898

De Roeck, Guido, P.E.
see Reynders, Edwin, 527

De Sanctis, Annamaria E.
Real-Time Identification of Possible Contamination Sources Using Network Backtracking Methods, 2003

de Solminihac, Hernan, Ph.D.
see Valenzuela, Sergio, M.Sc., 126

de Vriend, Huib J.
see Yossef, Mohamed F. M., 1004

Deason, Jonathan P.
Integrated Planning Framework for Urban River Rehabilitation, 2029

Deatherage, J. Harold, P.E.
see Scoble, Kyle P., 1498

Deb, Arghya
Investigation into the Effect of Bonding on FRP-Wrapped Cylindrical Concrete Columns, 246

Debnath, Koustuv
Bridge Pier Scour in Clay-Sand Mixed Sediments at Near-Threshold Velocity for Sand, 1003

DebSarkar, A.
see Mukherjee, I., 622

Deely, Elaine
see Laefer, Debra F., 1176

Degrauwe, Daan
see Reynders, Edwin, 527

Dehoff, Andrew D.
see Zhang, Zhenxing, 1081

Deierlein, G. G.
see Myers, A. T., 598

Deifalla, A.
Full Torsional Behavior of RC Beams Wrapped with FRP: Analytical Model, 205
Strengthening RC T-Beams Subjected to Combined Torsion and Shear Using FRP Fabrics: Experimental Study, 206

Dekelbab, W.
see Fu, G., 2129

Del Giudice, Giuseppe
Design of a Scroll Vortex Inlet for Supercritical Approach Flow, 1030

Delaney, T.
see Bachand, P. A. M., Ph.D., 746

DeLano, John
see Davids, William G., P.E., 97

Delavari-Edalat, Farideh
Human-Environment Interactions Based on Biophilia Values in an Urban Context: Case Study, 1935

Deletic, Ana
see Francey, Matt, 654

Delorme, Louis
see Poulin, Annie, 2025

Demir, C.
see Ispir, M., 1420

Demir, Cem
Effects of Loading Rate and Duration on Axial Behavior of Concrete Confined by Fiber-Reinforced Polymer Sheets, 190

Demirbilek, Zeki
see Nwogu, Okey, 2056

Demirboga, Ramazan
see Karakoç, Mehmet Burhan, Ph.D., 1486

Demissie, Misganaw
see Lian, Yanqing, 1119

Deng, An
Measuring and Modeling Proportion-Dependent Stress-Strain Behavior of EPS-Sand Mixture, 34

Deng, Lu
Bridge Model Updating Using Response Surface Method and Genetic Algorithm, 147
Bridge Scour: Prediction, Modeling, Monitoring, and Countermeasures—Review, 2142

Deng, Weijia
see Lee, Der-Horng, 1794

Denich, Chris
Estimation of Evapotranspiration from Bioretention Areas Using Weighing Lysimeters, 1108

Dennis, Norman D.
see Neupauer, Roseanna M., 1583

Denoël, V.
Multiple Scales Solution for a Beam with a Small Bending Stiffness, 466

Dentel, Steven K.
see Ayol, Azize, 721

Deo, Omkar
Permeability Reduction in Pervious Concretes due to Clogging: Experiments and Modeling, 1424

Deodatis, George
see Franco, Guillermo, 2078

Der Kiureghian, Armen
see Straub, Daniel, 583
see Straub, Daniel, 584

Dermatas, Dimitris
see Chrysochoou, Maria, 823
see Puppala, Anand J., Ph.D., P.E., 1446

Derry, Jeff
see Toniolo, Horacio, 1040

Desai, Anuradha M.
Variability of *Escherichia coli* Concentrations in an Urban Watershed in Texas, 762

Deshpande, V. S.
see Ossa, E. A., 1353

Deshpande, Vighnesh P.
Modeling Pavement Fragility, 1851

Dessalegne, Tibebe
see Nicklow, John, 2001

Dessouky, Samer
see Al-Qadi, Imad L., Dist., 1454

Detert, Martin
Estimation of the Washout Depth of Fine Sediments from a Granular Bed, 1022
Laboratory Measurements on Turbulent Pressure Fluctuations in and above Gravel Beds, 1021

Dethlefs, Richard A.
see Hill, Howard J., 2148
see Hill, Howard J., 2149

Detournay, E.
see Denoël, V., 466

Deveci, Hacı
see Türk, Tuğba, 656

DeVilbiss, Carl, P.E.
see Gilbert, Douglas C., 2062

Devlin, M. Scott
MBTI Personality and Hemisphericity of a U.S. Air Force Group, 2072

Devriendt, Mike
see Fuentes, Raul, 911

Dewulf, Geert
see Adriaanse, Arjen, 414

Dey, Subhasish
Turbulence Characteristics in Flows Subjected to Boundary Injection and Suction, 544
see Ballio, Francesco, 985
see Chen, Xiaoli, Ph.D., 974

Dhar, Anirban
Logic-Based Design of Groundwater Monitoring Network for Redundancy Reduction, 1967

Dhingra, S. L.
see Khasnabis, S., 1927

Dhol, Arvinder
see Achari, Gopal, 2105

Di Cristo, Cristiana
Influence of Relative Roughness and Reynolds Number on the Roll-Waves Spatial Evolution, 943

Di Federico, Vittorio
see Ugarelli, Rita, 1174
see Ugarelli, Rita, 1994

Di Ludovico, M.
FRP Strengthening of Full-Scale PC Girders, 228

Di Ludovico, Marco
FRP Confinement of Tuff and Clay Brick Columns: Experimental Study and Assessment of Analytical Models, 235
Structural Upgrade Using Basalt Fibers for Concrete Confinement, 231

Di Marco, Melissa K.
Emergence and Role of Cultural Boundary Spanners in Global Engineering Project Networks, 1329

di Prisco, Claudio
Design Charts for Evaluating Impact Forces on Dissipative Granular Soil Cushions, 922

Dias, Daniel
see Mollon, Guilhem, 794

Diaz de Leon, Alicia, ed.
see Chen, Shen-en, ed., 2245

Diaz, Manuel A.
see Mott, Richard, 2140

Dickert, Allison
Special Report: The Infrastructure Roundtables: Concluding Thoughts—Address Life-Cycle Costs and Ongoing Maintenance, 2183

Dickey, G. Edward
see Deason, Jonathan P., 2029

Dickinson, S.
Thickness and Hydraulic Performance of Geosynthetic Clay Liners Overlying a Geonet, 828

Diekmann, James
see Chinowsky, Paul S., 359

Dietrich, Andrea M., Ph.D., Aff.ASCE
see Whelton, Andrew J., Ph.D., 634

Dikmen, Irem
see Isik, Zeynep, 1318
see Ozorhon, Beliz, 1336

Dikshit, Anil Kumar
see Sudhakar, Yedla, 732

Dilena, Michele, Ph.D.
Reconstruction Method for Damage Detection in Beams Based on Natural Frequency and Antiresonant Frequency Measurements, 492

Dimitrakopoulos, Elias
Dimensional Analysis of the Earthquake Response of a Pounding Oscillator, 489

Dinan, Robert J.
see Chung, Jae H., 1636

Dineva, Petia
see Ivanova, Jordanka, 579

Ding, Hua
see Li, Hui, 472

Ding, Jie
Release and Removal of Microcystins from *Microcystis* during Oxidative-, Physical-, and UV-Based Disinfection, 609

Ding, Zhikun
Personal Construct-Based Factors Affecting Interpersonal Trust in a Project Design Team, 337

Diplas, P.
Nonintrusive Method for Detecting Particle Movement Characteristics near Threshold Flow Conditions, 1284
see Kozarek, J. L., 1053
see Radspinner, R. R., 1045
see Stoesser, T., 1048

Diplas, Panayiotis
see Shen, Yi, 1052

Dirk van Ettinger, Hendrik
see Cáceres, Iván, 973

Do, Minh Tan
see Kane, Malal, 1793

Dobry, R.
see El Shamy, U., P.E., 32

Dobry, Ricardo
see Sharp, Michael K., 904

Dobson, James G.
see Colby, Jeffrey D., 2079

Dodagoudar, G. R., Ph.D.
see Chandrasekaran, S. S., 830

Dolan, J. Daniel
see Graham, Drew A., 1349
see Graham, Drew A., 1609

Dolhon, Anthony M., ed.
see Chen, Shen-en, ed., 2245

Dolloff, C. A.
see Kozarek, J. L., 1053

Dombrowski, Frank J., CHMM
Evaluation of Surface Water Runoff from Fly Ash–Stabilized and Nonstabilized Soil Surfaces, 716

Donald, Ross
see Jewers, Sam, 1598

Dong, Guohai
see Ma, Yuxiang, 467

Dong, Jun
Behavior of Hollow Tubular-Flange Girder Systems for Curved Bridges, 1624

Dong, Qiao
see Huang, Baoshan, 1416

Dong, Xiaofeng
see Liu, Lichen, 1956

Dong, Yuanhong
see Zhang, Mingyi, 176

Dong, Ze-Jiao
see Yi-qiu, Tan, 1434

Donmez, Birsen
Differences in Off-Road Glances: Effects on Young Drivers' Performance, 1831

Donnell, Eric T., P.E.
see Cruzado, Ivette, 1869
see Himes, Scott C., 1880

Doocy, Shannon
see Gorokhovich, Yuri, 1560

Dorini, Gianluca
SLOTS: Effective Algorithm for Sensor Placement in Water Distribution Systems, 2022

Dormieux, Luc
see Sanahuja, Julien, Ph.D., 483

Dossick, Carrie S., P.E.
Organizational Divisions in BIM-Enabled Commercial Construction, 360

Dousti, Ali
see Moradi-Marani, Farid, 1525

Dowd, Joseph, P.E. senior associate
see Aniol, R. John, P.E., 2160

Dowgul, Ronald W., Ph.D.
see Yazdani, Nur, Ph.D., 1508

Downey, Mortimer
Special Report: The Infrastructure Roundtables: Concluding Thoughts— Increase and Improve Investment From All Stakeholders, 2184

Dragovich, Jeff, Ph.D., P.E.
see Mason, Greg, Ph.D., P.E., 1602

Drdácký, Miloš F.
Flood Damage to Historic Buildings and Structures, 1540

Drengler, Kelly L.
see Chrysochoou, Maria, 877

Drerup, Michael J., ed.
see Chen, Shen-en, ed., 2245

Drew, Derek S.
see Oo, Bee-Lan, 386
see Yang, Jing, 391

Drysdale, Robert G.
see Shedid, Marwan T., 1495
see Shedid, Marwan T., 1674
see Shedid, Marwan T., 1751

Du, Lin
see Wang, Zong-ping, 626

Du, Xiu-Li
Nonlinear Unified Strength Criterion for Concrete under Three-Dimensional Stress States, 464

Duan, Huan-Feng
Probabilistic Analysis of Transient Design for Water Supply Systems, 2028

Duan, Jennifer G.
see Julien, Pierre Y., 1009

Duan, Kai
see Hu, Xiaozhi, 465

Duan, L.
see King, W. S., 1605

Duan, Runbin
Performance of a Combined Natural Wastewater Treatment System in West Texas, 1222

Duchesne, Sophie
see Mailhot, Alain, 1979

Duchnowski, Robert, Ph.D.
Median-Based Estimates and Their Application in Controlling Reference Mark Stability, 1772

Duddleston, Khrystyne N.
see Schnabel, William E., 171

Dudi, Abhijeet
see Parks, Jeffrey, 1398

Dukes, Michael D., P.E.
see Cardenas-Lailhacar, Bernard, 1220

Dulovičová, Renáta, M.Sc.
Aggradation of Irrigation Canal Network in Žitný Ostrov, Southern Slovakia, 1247

Duncan, Hugh
see Francey, Matt, 654

Duncan, J. Michael
see Rice, John D., 775
see Rice, John D., 776

Dunn, Chad J., P.E.
Headworks and Headway, 2161

Dunston, Phillip S.
see Valentin, Vanessa, 1850

Dupigny-Giroux, L.-A.
see Prevatt, D. O., 2092

Dupuis, Debbie J.
Statistical Modeling of the Monthly Palmer Drought Severity Index, 1135

Duque, O.
see Zorita, A. L., 1893

Durgaprasad, J.
Knowledge and Data Integration for Modeling of Problems of Risk due to Natural and Man-Made Hazards, 2120

Dusicka, Peter
Cyclic Behavior of Shear Links of Various Grades of Plate Steel, 1645

Duthie, Jennifer
Highway Improvement Project Rankings due to Uncertain Model Inputs: Application of Traditional Transportation and Land Use Models, 1949

Duthinh, Dat
Safety of Structures in Strong Winds and Earthquakes: Multihazard Considerations, 1640
see Coffman, Bradley F., 1681

Dutta, Goutam
see Sarkar, Debasis, 376

Duviella, E.
Supervised Gain-Scheduling Multimodel versus Linear Parameter Varying Internal Model Control of Open-Channel Systems for Large Operating Conditions, 1260

Dwaikat, Mahmud
see Kodur, Venkatesh, 1388

Dwivedi, Ambuj
Hydrodynamic Forces Generated on a Spherical Sediment Particle during Entrainment, 1019

Dymond, Benjamin Z.
Shear Strength of a Lightweight Self-Consolidating Concrete Bridge Girder, 152

Dzombak, David A.
see Khaitan, Sameer, 726

Earles, Andrew, Ph.D., P.E., D.WRE
see Guo, James C. Y., Ph.D., P.E., 1285

Earles, T. Andrew
see Guo, James C. Y., 761

Eastman, C. M.
Exchange Model and Exchange Object Concepts for Implementation of National BIM Standards, 264

Eberhard, Marc O.
see Pang, Jason B. K., 116

Eberhardt, Arnd
see Sant, Gaurav, 1371

Ebisa Fola, Miressa
Downstream Hydraulic Geometry of Clay-Dominated Cohesive Bed Rivers, 997

Ebrahimi, Ali
see Zaman, Musharraf, 12

Echaveguren, Tomas, Ph.D.
see Valenzuela, Sergio, M.Sc., 126

Eck, Bradley
Hydrologic and Water Quality Aspects of Using a Compost/Mulch Blend for Erosion Control, 1272

Edara, Praveen
Development of a Large-Scale Traffic Simulation Model for Hurricane Evacuation—Methodology and Lessons Learned, 2091

Edil, T. B.
see Schuettpelz, C. C., 881

Edil, Tuncer B.
see Bareither, Christopher A., 706

Edwards, David J., Ph.D.
see Lopez, Robert, 1536
see Love, Peter E. D., 342
see Love, Peter E. D., 379

Edwards, Marc
see Parks, Jeffrey, 1398

Edwards, Ryon
see Schnabel, William E., 171

Edwards, S. J.
see Ragheb, A. E., 1775

Effler, Steven W.
see Rucinski, Daniel K., 688

Ehrlich, Mauricio
see Oliveira, Henrique Magnani, 799

Ehsani, Mohammad R.
see Sadeghian, Pedram, 221

Ehsanzadeh, Eghbal
Frequency Analysis Incorporating a Decision Support System for Hydroclimatic Variables, 1143

Eid, R.
see Paultre, P., 1728

El Adlouni, S., Ph.D.
Generalized Extreme Value versus Halphen System: Exploratory Study, 1065

El Adlouni, Salaheddine
see Ehsanzadeh, Eghbal, 1143

El Asmar, Mounir
Quantitative Methods for Design-Build Team Selection, 405

El Sawwaf, Mostafa
Experimental Study of Eccentrically Loaded Raft with Connected and Unconnected Short Piles, 909

El Shamy, U., P.E.
Micromechanical Aspects of Liquefaction-Induced Lateral Spreading, 32

El Yacoubi, S.
see Marcou, O., 1288

Ela, Wendell P.
see Shan, Jilei, 635

El-Adaway, Islam H.
Construction Risks: Single versus Portfolio Insurance, 1317

El-adaway, Islam H.
Integrated Project Delivery Case Study: Guidelines for Drafting Partnering Contract, 1316
Multiagent System for Construction Dispute Resolution (MAS-COR), 345

El-Anwar, Omar
Maximizing Temporary Housing Safety after Natural Disasters, 1177
Maximizing the Sustainability of Integrated Housing Recovery Efforts, 393
see Kandil, Amr, 316

Elazouni, Ashraf M.
see Abido, M. A., 293

El-Dakhakhni, W. W., Ph.D., P.E.
Validity of SDOF Models for Analyzing Two-Way Reinforced Concrete Panels under Blast Loading, 1527

El-Dakhakhni, Wael W.
Detection of Ungrouted Cells in Concrete Masonry Constructions Using a Dielectric Variation Approach, 502
see Shedid, Marwan T., 1495
see Shedid, Marwan T., 1674
see Shedid, Marwan T., 1751

Eldeiry, Ahmed A.
Comparison of Ordinary Kriging, Regression Kriging, and Cokriging Techniques to Estimate Soil Salinity Using LANDSAT Images, 1240

Eldho, T. I.
see Mohrlok, Ulf, 2115
see Mondal, Arpita, 1091
see Patel, H. M., 1211
see Reshmidevi, T. V., 1242

El-Diraby, Tamer E.
see El-Gohary, Nora M., 346
see El-Gohary, Nora M., 387

Elefteriadou, Lily, Ph.D.
see Kim, Joonhyo, Ph.D., 1795

Elenany, Mohammed
see Cai, Jianan, 577
see Hall, Neil, 1017

Elgamal, A.
see El Shamy, U., P.E., 32

Elgamal, Ahmed
see Fraser, Michael, 263
see Wilson, Patrick, 932

ElGawady, Mohamed
Retrofitting of Rectangular Columns with Deficient Lap Splices, 179
Seismic Behavior of Posttensioned Concrete-Filled Fiber Tubes, 238

El-Gohary, Fatma
see Mahmoud, Mohamed, 644

El-Gohary, Nora M.
Domain Ontology for Processes in Infrastructure and Construction, 387
Dynamic Knowledge-Based Process Integration Portal for Collaborative Construction, 346

El-Hacha, Raafat
Effect of Severe Environmental Exposures on CFRP Wrapped Concrete Columns, 184

El-Harbawi, Mohanad
SCIA: GIS-Based Software for Assessing the Impacts from Chemical Industrial Accidents, 2106

ElKhatib, H.
see Harajli, M., 1475

Ellinas, Georgios
see Christodoulou, Symeon E., 366
see Christodoulou, Symeon E., 1178

Ellingwood, Bruce R.
see Adachi, Takao, 1162
see Wang, Naiyu, 1721

Elliott, Julie L.
see Pearson, Chris, 1776

Ellis, Ralph D.
see Kim, Jin-Lee, 330

Ellis, Timothy G., P.E.
see Evans, Eric A., P.E., 737

Elmalich, Dvir
Nonlinear Analysis of Masonry Arches Strengthened with Composite Materials, 557

El-Mogy, Mostafa
Flexural Behavior of Continuous FRP-Reinforced Concrete Beams, 243

Elmore, Andrew Curtis, Ph.D., P.E.
see Johnson, Benjamin W., 2113

Elnashai, Amr
see El-Anwar, Omar, 1177

Elnashai, Amr S.
see El-Anwar, Omar, 393
see Nakata, Narutoshi, 478

El-Ragaby, Amr
see El-Mogy, Mostafa, 243

El-Rayes, Khaled
see El-Anwar, Omar, 393
see El-Anwar, Omar, 1177
see Kandil, Amr, 316
see Orabi, Wallied, 1339
see Peña-Mora, Feniosky, 289

El-Sadi, Haifa
CFD Analysis of Turbulent Natural Ventilation in Double-Skin Façade: Thermal Mass and Energy Efficiency, 454

El-Said, Moheeb
see Marzouk, Mohamed, 381

El-Salakawy, Ehab
see Ahmed, Ehab A., 177
see El-Mogy, Mostafa, 243

El-Salakawy, Ehab F.
see Ahmed, Ehab A., 98

El-Sayed, Ahmed K.
see Ahmed, Ehab A., 177

Elseifi, Mostafa A.
Relationship between Molecular Compositions and Rheological Properties of Neat Asphalt Binder at Low and Intermediate Temperatures, 1490

Elsheikh, Ahmed
see Kassem, Wael, 1727

Elsin, Yoanna Kraus
Valuing Drinking Water Provision as an Ecosystem Service in the Neuse River Basin, 2006

Elsworth, Derek
see Fitzgerald, Michael, 485

El-Tawil, Sherif
Recommendations for Seismic Design of Hybrid Coupled Wall Systems, 2273
Seismic Design of Hybrid Coupled Wall Systems: State of the Art, 1683
see Alashker, Yasser, Ph.D., 1724
see Park, Philip, 118

Elvin, Alex
see Walls, Richard, 1748

Elwi, A.
see Hao, Z., 191

Elyamany, Ahmed
Contractor Performance Evaluation for the Best Value of Superpave Projects, 374

Emami, Farzad
see Karamouz, Mohammad, 1291

Emiroglu, M. Emin
Discharge Capacity of Labyrinth Side Weir Located on a Straight Channel, 1203

Endeshaw, Mesay
see ElGawady, Mohamed, 179

Enright, Bernard
see OBrien, Eugene J., 114

Eom, Tae-Sung
Elongation of Reinforced Concrete Members Subjected to Cyclic Loading, 1711

Erdal, Ferhat
see Hasançebi, Oğuzhan, 1650

Erdem, Ibrahim, Ph.D.
Analytical Investigation of Lateral Strength of Masonry Infilled RC Frames Retrofitted with CFRP, 1526

Erdogan, B.
see Hekimoglu, S., 1773

Erdoğan, Sinan
see Mahmoud, Enad, 1381

Erdogmus, Ece
Recommendations for Design of Reinforced Concrete Pipe, 1564
see Morcous, George, Ph.D., P.E., 1558

Ergas, Sarina J., P.E.
Performance of Nitrogen-Removing Bioretention Systems for Control of Agricultural Runoff, 733

Erikson, Robert G., Ph.D.
see Puckett, Jay A., Ph.D., P.E., 1726

Erker, Benjamin T.
see Chen, Wei-Hsiang, 730

Ernst, Joseph M.
see Brennan, Thomas M., Ph.D., P.E., 1907

Ernst, Stefan, Ph.D.
Correlation of Beam Tests with Pushout Tests in Steel-Concrete Composite Beams, 1625

Escauriaza, Cristian
see Paik, Joongcheol, 1046

Escobet, T.
see Duviella, E., 1260

Eskandari-Ghadi, Morteza
Forced Vertical Vibration of Rigid Circular Disc on a Transversely Isotropic Half-Space, 548

Esmaeily, Asad, Ph.D., P.E.
see Nayal, Rim, Ph.D., 164

Estakhri, Cindy, P.E.
see Alvarez, Allex E., 1403
see Alvarez, Allex E., 1470

Estrada, Hector
see Lee, Luke S., 203

Eum, Hyung-Il
Climate Change Impact Assessment Using K-Nearest Neighbor Weather Generator: Case Study of the Nakdong River Basin in Korea, 1133

Evans, Eric A., P.E.
Experimental Validation of the Static Granular Bed Reactor for Industrial Waste Anaerobic Treatment, 737

Evans, Richard
see Sebastian, Wendel, 1761

Ewais, A. Ragab
see Rowe, R. Kerry, 865

Ewers, Brook
see Indraratna, Buddhima, 841

Exner-Kittridge, Michael Grant
Case Study on the Accuracy and Cost/Effectiveness in Simulating Reference Evapotranspiration in West-Central Florida, 1125

Eyidogan, Muharrem
see Kaya, Durmus, 449

Eykholt, Richard
see Julien, Pierre Y., 1009

Fabrie, P.
Quality Modeling of Water Distribution Systems Using Sensitivity Equations, 944

Facas, Norman W.
Anisotropy in the Spatial Distribution of Roller-Measured Soil Stiffness, 25
Influence of Rocking Motion on Vibratory Roller-Based Measurement of Soil Stiffness, 546

Fahmy, Mohamed, P.Eng.
Automated Detection and Location of Leaks in Water Mains Using Infrared Photography, 1519

Fallah, S. R.
see Mirakbari, M., 1154

Fallahi, Ali
see El-Sadi, Haifa, 454

Fallahi, Morteza
see Eskandari-Ghadi, Morteza, 548

Fam, Amir
see Ampiah, Nancy, 1492
see Mitchell, Jeffrey, 187
see Sadeghian, Pedram, 512

Fan, Jiansheng
Long-Term Behavior of Composite Beams under Positive and Negative Bending. I: Experimental Study, 1691
Long-Term Behavior of Composite Beams under Positive and Negative Bending. II: Analytical Study, 1692

Fan, Maohong, Ph.D., P.E.
see Li, Ling, Ph.D., 645

Fan, Xinglang
see Wu, Zhimin, 580

Fan, Yueyue
Highway Network Retrofit under Seismic Hazard, 1182

Fang, Hongwei
Influence of Vertical Resolution and Nonequilibrium Model on Three-Dimensional Calculations of Flow and Sediment Transport, 953

Fang, Xing, P.E.
Numerical Simulations of Efficiency of Curb-Opening Inlets, 948
see Liu, Jiliang, 1286

Fang, Zheng
Using a Distributed Hydrologic Model to Evaluate the Location of Urban Development and Flood Control Storage, 2020
see Wu, Jichun, 1079

Fares, Ali
see Mair, Alan, 1062

Fares, Hussam
Hierarchical Fuzzy Expert System for Risk of Failure of Water Mains, 1567

Farhadzadeh, Ali
see Kobayashi, Nobuhisa, 2052

Farhat, Farhat A.
Behavior of RC Beams Retrofitted with CARDIFRC after Thermal Cycling, 1342

Farhey, Daniel N., D.Sc., P.E.
Performance of Bridge Materials by Structural Deficiency Analysis, 1530

Faria, Marco Tulio C.
Influence of Mechanical Draft Tube Fish Barrier on the Hydraulic Thrust of Small Francis Turbines, 1038

Farooq, Mohamad
see Shehab, Tariq, 1574

Farouk, Bakhtier
see Hoque, Shamia, 685

Farzaneh, Orang
see Seyedi Hosseininia, Ehsan, Aff.ASCE, 530

Fassman, Elizabeth, Ph.D.
see Voyde, Emily, 1095

Fassman, Elizabeth A., Ph.D.
Urban Runoff Mitigation by a Permeable Pavement System over Impermeable Soils, 1103

Fatemi, Mostafa
see Morley, Matthew C., 2104

Faucette, L. Britt
see Beighley, R. Edward, 1245

Faughtenberry, Jonathan, P.E.
see Hutson, Alan, P.E., 2193

Fawzy, Tarek M.
see Hussein, Mohamed, 261

Fayek, Aminah Robinson
see Abdelgawad, Mohamed, 416
see Marsh, Krista, 435

Fazel Najfabadi, Elham
see Afzalimehr, Hossein, 1127

Fazelzadeh, S. A.
see Mazidi, A., 65

Fazio, Paul, P.E.
see Tan, Xiangyang, 280

Fecarotta, O.
see Carravetta, A., 1027

Fedler, Clifford B., P.E.
see Duan, Runbin, 1222

Feigenbaum, Heidi P.
see Plesek, Jiri, 507

Feldsher, Theodore B., P.E.
A Solid Foundation, 2209

Feng, Chung-Wei
see Yeh, Ta-Kang, 1771

Feng, D. M., Ph.D.
see Yang, Q. R., 501

Feng, J.
see Fu, G., 2129

Feng, Li, M.E.
see Xiaoqing, Zhang, Ph.D., 493

Feng, Maria Q.
see Soyoz, Serdar, 469

Fenton, Gordon A.
see Huang, Jinsong, 814

Fenves, Gregory L.
see McKenna, Frank, 271
see Scott, Michael H., 1655

Fenwick, Richard
see Washer, Glenn, 130

Fernald, Alexander G.
River Hydrograph Retransmission Functions of Irrigated Valley Surface Water–Groundwater Interactions, 1289

Fernández, M. A.
see Zorita, A. L., 1893

Fernández-Barrera, Andrés H., Ph.D.
see Rodriguez-Hernandez, Jorge, Ph.D., 773

Fernández-Sáez, J.
see Loya, J. A., 525

Fernando, Pacheco-Torgal
Durability and Environmental Performance of Alkali-Activated Tungsten Mine Waste Mud Mortars, 1444

Fernando, Siri, P.E.
see Alex, Dinu Philip, M.Sc., 388

Ferrara, D.
see Mortara, G., 874

Ferraro, Rossella M.
Carbon Neutral Off-White Rice Husk Ash as a Partial White Cement Replacement, 1464

Ferreira, Luis
see Jaiswal, Sumeet, 1915

Ferrier, E.
Mechanical Behavior of an Innovative Hybrid Beam Made of Glulam and Ultrahigh-Performance Concrete Reinforced with FRP or Steel, 197

Festugato, Lucas
see Consoli, Nilo Cesar, Ph.D., 849

Fiani, Emmanuel
see Babilotte, Antoine, 701

Ficker, Tomáš
Fractal Dimensions of Fracture Surfaces, 476

Fidler, Paul R. A.
see Hoult, Neil A., 109

Figueroa, Linda A., Ph.D.
see Hemsi, Paulo S., Ph.D., 714

Fike, Rustin
see Kodur, Venkatesh, 1388

Filiatrault, Andre
Experimental Seismic Response of a Full-Scale Light-Frame Wood Building, 1631
see van de Lindt, John W., 1611

Filibeli, Ayse
see Ayol, Azize, 721

Filion, Y. R.
Developing and Teaching a Course in "Applied Sustainability and Public Health in Civil Engineering Design" at Queen's University, Kingston, Canada, 1601

Least-Cost Design of Water Distribution Networks Including Fire Damages, 2026

Filion, Yves
see Roy-Poirier, Audrey, 710

Filippou, Filip C.
see Ayoub, Ashraf, 1648

Filliben, J. J.
Tall Building Response Parameters: Sensitivity Study Based on Orthogonal Factorial Experiment Design Technique, 1622

Finkenbinder, David E.
see Hindman, Daniel P., 1482
see Hindman, Daniel P., 1483

Finno, Richard, .Ph.D., P.E., ed.
Earth Retention Conference 3, 2237

Finno, Richard J.
see Cho, Wanjei, 790

Firoozabadi, B.
see Tamayol, A., 612

Firouz-Abadi, R. D.
see Darbandi, S. M., 506

Fischbeck, Paul
see Xu, Jianhua, 1980

Fischer, Gregor
see Rajabipour, Farshad, 1480

Fisseha, B.
Evaporation, Unsaturated Flow, and Salt Accumulation in Multilayer Deposits of "Paste" Gold Tailings, 939

Fissel, Robert
see Hutson, Alan, P.E., 2193

Fıstıkoğlu, Okan
see Gül, Ali, 1087

Fitzgerald, G. J.
see French, A. N., 1225

Fitzgerald, Michael
Evolution of the Pore-Pressure Field around a Moving Conical Penetrometer of Finite Size, 485

Fitzpatrick, Kay, P.E.
Horizontal Curve Accident Modification Factor with Consideration of Driveway Density on Rural Four-Lane Highways in Texas, 1877

Fitzwilliam, Jason
Slenderness Effects on Circular CFRP Confined Reinforced Concrete Columns, 204

Flanders, Michael U.
see Hoffman, Daniel E., 1191

Fleming, I. R.
see Singh, M. K., 2099

Flener, Esra Bayoğlu, Ph.D.
Soil-Steel Interaction of Long-Span Box Culverts—Performance during Backfilling, 854

Fletcher, Tim D.
see Francey, Matt, 654

Flint, Courtney G.
Building Community Disaster Preparedness with Volunteers: Community Emergency Response Teams in Illinois, 2090

Flood, Ian
Empirical Modeling Methodologies for Construction, 318

Flores-Colen, I.
Discussion of Criteria for Prioritization of Predictive Maintenance of Building Façades: Survey of 30 Experts, 1529

Floss, Márcio Felipe
see Consoli, Nilo Cesar, Ph.D., 849

Foguet, Agustí Pérez
see Garriga, Ricard Giné, 754

Foley, Michael J. H.
Case Studies on Negotiation and Mediation for Coastal Zone Conflicts, 1309

Fontana, Mario, Ph.D.
see Frangi, Andrea, Ph.D., 1629

Fontane, Darrell G.
see Hidalgo, Ieda G., Ph.D., 456

Formal'skii, Alexander M.
Ballistic Walking Design via Impulsive Control, 54

Forster, Aaron
see Chin, Joannie, 1460

Forth, J. P.
Investigating the Effects of Curing Methods on the Compressive Strength of Bitublock, 1362

Fortier, R.
see Buteau, S., 168

Fortin, V.
see Yonaba, H., 1085

Fortney, Patrick
see El-Tawil, Sherif, 2273

Fortney, Patrick J., Ph.D.
see El-Tawil, Sherif, Ph.D., P.E., 1683

Forzieri, Giovanni
Riparian Vegetation Mapping for Hydraulic Roughness Estimation Using Very High Resolution Remote Sensing Data Fusion, 1032

Foster, Stephen J.
see Khomwan, Nantawat, 247
see Voo, Yen Lei, 1743

Fotia, G.
see Mortara, G., 874

Fox, Peter
see Nalinakumari, Brijesh, 652

Fox, Stephen
Assessing the Relevance of Media Synchronicity Theory to the Use of Communication Media in the AECO Industry, 81

Fragiacomo, M.
see Lukaszewska, E., Ph.D., 1610

Fragiacomo, Massimo
see Gattesco, Natalino, 1626

Francesca, Ventura
Soil Moisture Measurements: Comparison of Instrumentation Performances, 1208

Franceschini, Samuela
Application of Hilbert-Huang Transform Method for Analyzing Toxic Concentrations in the Niagara River, 1066

Francey, Matt
New Insights into the Quality of Urban Storm Water in South Eastern Australia, 654

Francis, Valerie
see Lingard, Helen, 433

Franco, Guillermo
Field Damage Survey of New Orleans Homes in the Aftermath of Hurricane Katrina, 2078

Frangi, Andrea, Ph.D.
Fire Design of Timber-Concrete Composite Slabs with Screwed Connections, 1629

Frangopol, Dan M.
see Okasha, Nader M., 312
see Okasha, Nader M., 1707
see Orcesi, André D., 124
see Strauss, Alfred, 1614

Frank, Karl H.
see Wood, Sharon L., 106

Fraser, Michael
Sensor Network for Structural Health Monitoring of a Highway Bridge, 263

Fratino, U.
see Daccache, A., 1229

Fratta, D.
see Schuettpelz, C. C., 881

Fratta, Dante
see Alramahi, Bashar, 834

Fratta, Dante O., Ph.D, P.E., ed.
GeoFlorida 2010: Advances in Analysis, Modeling & Design (GSP 199), 2247

Fredlund, Delwyn G.
see Chen, Yunmin, 843

Freiha, Fadi
see Sadek, Salah, 821

Freitas, V.
see Flores-Colen, I., 1529

French, A. N.
Combining Remotely Sensed Data and Ground-Based Radiometers to Estimate Crop Cover and Surface Temperatures at Daily Time Steps, 1225

French, Steven P.
Estimating the Social and Economic Consequences of Natural Hazards: Fiscal Impact Example, 2083

French, Wendy
see Jewers, Sam, 1598

Freni, Gabriele
Urban Storm-Water Quality Management: Centralized versus Source Control, 1986

Frevert, Donald K., Ph.D., P.E., ed.
see Potter, Kenneth W., Ph.D., 2293

Frey, Christopher, Ph.D.
see Rasdorf, William, Ph.D., P.E., 1186

Fries, J. Stephen
Particle Fluxes into Permeable Sediments: Comparison of Mechanisms Mediating Deposition, 965

Friesen, Noah
see Julien, Pierre Y., 1009

Frigione, Mariaenrica
see Sciolti, Margherita Stefania, 257

Frimpong, Samuel
Numerical Simulation Software for Oil Sand Slurry Flow in Flexible Pipelines, 452

Friswell, Michael I.
see Herencia, J. Enrique, 569

Fritsch, Andreas, Ph.D.
see Sanahuja, Julien, Ph.D., 483

Froehlich, David C., Ph.D., D.WRE, P.E.
Short-Duration Rainfall Intensity Equations for Urban Drainage Design, 1257

Frulla, G.
see Borello, F., 74

Fryd, Ole
see Laugesen, Carsten, 2286

Fu, G.
Planning for Commercial Vehicle Weight Limit Change: Application and Computer Software, 2129

Fu, Guangtao
Optimal Distribution and Control of Storage Tank to Mitigate the Impact of New Developments on Receiving Water Quality, 648

Fu, Guo Ji
see Yan, Li Chun, 1845

Fu, Hao
see Fu, Jing-Li, 2134

Fu, Jaw
see Khaitan, Sameer, 726

Fu, Jie
Photoreduction of Reactive Brilliant Red X-3B by Ultraviolet Irradiation/Potassium Borohydride/ Sodium Bisulfite, 758

Fu, Jing-Li
Damped Properties and Noether Symmetries of Damped Free Vibration, 2134

Fu, Pengcheng
Investigation of the Curing Mechanism of Foamed Asphalt Mixes Based on Micromechanics Principles, 1343

Micromechanics of the Effects of Mixing Moisture on Foamed Asphalt Mix Properties, 1453

Fu, Xiang
Sensitivity Analysis for an Infiltration-Runoff Model with Parameter Uncertainty, 1122

Fuchs, Paul
see Chin, Joannie, 1460

Fuentes, J. M.
see Gallego, E., 394

Fuentes, Luis
Evaluation of the Effect of Pavement Roughness on Skid Resistance, 1857

Fuentes, Raul
Ground Movements around Corners of Excavations: Empirical Calculation Method, 911

Fukushi, Kensuke
see Modin, Oskar, 632

Fung, I. W. H.
see Wong, C. K., 425

Furrer, Reinhard
see Facas, Norman W., 25

Fwa, T. F.
see Ong, G. P., 1842

Gabbai, R. D.
Aerodynamic Damping in the Along-Wind Response of Tall Buildings, 1617

Gabr, M. A., Ph.D.
see Kim, Yun Tae, Ph.D., 1401

Gaidai, O.
see Naess, A., 488

Gaier, David W., ed.
Guidelines for Roving Security Inspections in Public Venues Using Explosives Detection Dogs, 2254

Gailani, Joseph
see Jepsen, Richard, 2058
see Jones, Craig, 4

Gajan, Sivapalan, Ph.D.
Improved Design of Embedment Depths for Transmission Pole Foundations Subject to Lateral Loading, 2137

Galal, Khaled
Out-of-Plane Flexural Performance of GFRP-Reinforced Masonry Walls, 192
Shear Strengthening of RC T-Beams Using Mechanically Anchored Unbonded Dry Carbon Fiber Sheets, 1497

Galavi, Vahid, Ph.D.
Nonlocal Multilaminate Model for Strain Softening Analysis, 15

Gallagher, Daniel L., Ph.D., P.E.
see Whelton, Andrew J., Ph.D., 634

Gallego, E.
Design of Tall Formworks by a Finite-Element Model, 394

Galloway, Gerald E., Ph.D., P.E.
Special Report: The Infrastructure Roundtables: Concluding Thoughts— Promote Sustainability And Resilience, 2181

Galloway, Kathleen E.
see McCuen, Richard H., 1126

Galsworthy, Jon
see Vickery, Peter J., 1668

Galsworthy, Jon K.
see Kopp, Gregory A., 1615

Galvão, Terezinha Cássia de Brito, Ph.D.
Bioengineering Techniques Associated with Soil Nailing Applied to Slope Stabilization and Erosion Control, 2082

Gambarova, P. G.
see Bamonte, P., 1402

Gambatese, John A.
see Hallowell, Matthew R., 324
see Hallowell, Matthew R., 412

Gambolati, G.
see Paris, A., 1144

Gan, Thian Yew
see Mwale, Davison, 1138

Gancel, G.
see Fabrie, P., 944

Gandhi, Tejash, Ph.D.
see Xiao, Feipeng, Ph.D., P.E., 1461

Gane, Victor
Benchmarking Current Conceptual High-Rise Design Processes, 87

Gang, Dianchen, P.E.
see Zhang, Ning, 731

Gang, Lu
see Qingsong, Wei, 1228

Gang-Tie, Zheng
see Tao, Zhang, 471

Ganguly, Moumita
see O'Rourke, Michael J., 77

Ganji, A.
see Mirakbari, M., 1154

Gannon, Jane
see Laefer, Debra F., 1176

Gantes, Charis J.
see Papageorgiou, Athanasios V., 582

Gao, Bin
see Sun, Huiming, 756

Gao, H. Oliver, Ph.D.
see Bapat, Ameya, 1799

Gao, Hong
see Ning, Ping, 770

Gao, Ziyou, ed.
see Mao, Baohua, ed., 2289

Garagash, D. I.
see Hu, J., 574

Garavalia, Linda, Ph.D.
see O'Bannon, Deborah J., Ph.D., P.E., 2075

Garbin, Enrico, Ph.D.
see da Porto, Francesca, 1742

Garboczi, Edward
see Mahmoud, Enad, 1381

García de Soto, Borja, P.E.
see Nguyen, Long D., 439

Garcia, Luis A.
see Eldeiry, Ahmed A., 1240

García, Marcelo H.
see Cataño-Lopera, Yovanni A., 998
see Dai, Albert, 996
see León, Arturo S., Ph.D., 1015
see Motta, Davide, 717
see Sequeiros, Octavio E., 987

García-Escudero, L. A.
see Zorita, A. L., 1893

Garciano, Lessandro Estelito O.
New Reference Wind Speed for Wind Turbines in Typhoon-Prone Areas in the Philippines, 1654

García-Soto, A. D.
see Hong, H. P., 1684

Garcilazo, Juan J.
see Kassimali, Aslam, 1739

Gardi, Roberto
see Borrelli, Rosario, 72

Gardner, Douglas J.
see Alvarez-Valencia, Daniel, 1484

Gardoni, Paolo
see Choe, Do-Eun, 554
see Deshpande, Vighnesh P., 1851
see Huang, Qindan, 593
see Pillai, Radhakrishna G., 1451
see Simon, Jessica, 1733
see Zhong, Jinquan, 480

Garg, Vaibhav
Modeling the Time Variation of Reservoir Trap Efficiency, 1155

Garlock, Maria E.
Modeling and Behavior of Steel Plate Connections Subject to Various Fire Scenarios, 1696

Garriga, Ricard Giné
Improved Method to Calculate a Water Poverty Index at Local Scale, 754

Garvey, Philip M.
see Meeker, Donald T., 1818

Garvin, Michael J., Ph.D.
Enabling Development of the Transportation Public-Private Partnership Market in the United States, 354

Gasparini, Dario A.
Cabin John Bridge: Role of Alfred L. Rives, C.E., 1514

Gasperi, A.
see Belletti, B., 1719

Gassman, Sarah L., P.E.
see Zein, Ahmed S., P.E., 161

Gates, Leslie
see Mahmoud, Enad, 1381

Gates, Timothy K.
see Triana, Enrique, 1977
see Triana, Enrique, 1978

Gattesco, Natalino
Moment Redistribution in Continuous Steel-Concrete Composite Beams with Compact Cross Section, 1626

Gaucher, Jérémie
Experimental Investigation of the Hydraulic Erosion of Noncohesive Compacted Soils, 1036

Gautam, Bishnu Prasad, M.E.
Failure Mechanism of Empty and Concrete-Filled CFRP Box Beams, 209

Gavanski, Eri
see Kopp, Gregory A., 2093

Gay, Paige A.
see Chin, David A., P.E., 1995

Gayah, Vikash
see Abdel-Aty, Mohamed, 1832

Gazetas, G.
see Giannakou, A., 891

Ge, Lei
see Wang, Jing, 625

Ge, Louis
see Chen, Cheng, 37
see Hotz, Robert D., 1386

Ge, Y. J.
see Zhang, Z. T., 155

Gebken, Richard J.
Impact of the Leadership in Energy and Environmental Design Accredited Professional Credential on Design Professionals, 1594
see McCrary, Steven W., P.E., 1303

Gedafa, Daba S., Ph.D.
Estimation of Remaining Service Life of Flexible Pavements from Surface Deflections, 1826
Field Verification of Superpave Dynamic Modulus, 1395

Geem, Zong Woo
Multiobjective Optimization of Time-Cost Trade-Off Using Harmony Search, 385

Genadio, Frank
A Rough Ride on the O'ahu Rail Transit Project, 2065

Gentile, F.
see Bisantino, T., Ph.D., 947

Georgakakos, Konstantine P.
see Shamir, Eylon, 1158

George, Biju
see Venot, Jean-Philippe, 1267

Georgiadis, Aggelos S.
Properties of SCC Produced with Limestone Filler or Viscosity Modifying Admixture, 1379

Georgiadis, K.
Undrained Bearing Capacity of Strip Footings on Slopes, 840
Undrained Lateral Pile Response in Sloping Ground, 918

Georgiadis, M.
see Georgiadis, K., 918

Gerber, Travis M.
see Rollins, Kyle M., 795

Gerolymos, N.
see Giannakou, A., 891

Gesoğlu, Mehmet
see Güneyisi, Erhan, 1385

Getachew, Abraham
see OBrien, Eugene J., 114

Geza, Mengistu
Watershed-Scale Impacts of Nitrogen from On-Site Wastewater Systems: Parameter Sensitivity and Model Calibration, 715

Ghaemmaghami, A. R.
Effect of Wall Flexibility on Dynamic Response of Concrete Rectangular Liquid Storage Tanks under Horizontal and Vertical Ground Motions, 1652

Ghafoori, Nader
Remediation and Air Void Stability of Hauled Self-Consolidating Concrete, 1445

Ghandehari, Masoud
Residual Mechanical Properties of High-Strength Concretes after Exposure to Elevated Temperatures, 1346

Ghandeharioon, Ali
Analysis of Soil Disturbance Associated with Mandrel-Driven Prefabricated Vertical Drains Using an Elliptical Cavity Expansion Theory, 17

Ghanem, Hassan, Ph.D.
Determination of the Main Parameters of Alkali Silica Reaction Using System Identification Method, 1441

Ghani, A. Ab.
see Julien, P. Y., 969

Ghani, Aminuddin Ab
see Azamathulla, H. Md., 958
see Azamathulla, H. Md., 1577

Gharaibeh, Nasir G.
Assessing the Agreement among Pavement Condition Indexes, 1870

Ghare, A. D.
Block Ramp Design for Efficient Energy Dissipation, 446

Ghenaim, Abdellah
see Ghostine, Rabih, 1024

Ghidaoui, Mohamed S.
see Duan, Huan-Feng, 2028
see León, Arturo S., Ph.D., 1015

Ghobarah, A.
see Deifalla, A., 205
see Deifalla, A., 206

Gholami, Ali, M.Sc.
see Mohaymany, Afshin Shariat, 1824

Ghose, Ranajit
see van Paassen, Leon A., 941

Ghosh, Ambarish
Compaction Characteristics and Bearing Ratio of Pond Ash Stabilized with Lime and Phosphogypsum, 1378

Ghosh, Jayadipta
Aging Considerations in the Development of Time-Dependent Seismic Fragility Curves, 1753

Ghosh, Jayanta Kumar
Knowledge-Based Landslide Susceptibility Zonation System, 291

Ghosh, Pijush
see Chakroborty, Partha, 1791

Ghosn, M.
see Pan, Y., 137
see Pan, Y., 138

Ghostine, Rabih
Discontinuous Galerkin Finite-Element Method for Simulation of Flood in Crossroads, 992
Two-Dimensional Simulation of Subcritical Flow at a Combining Junction: Luxury or Necessity?, 1024

Giannakos, Konstantinos, Ph.D.
Loads on Track, Ballast Fouling, and Life Cycle under Dynamic Loading in Railways, 1904

Giannakou, A.
Seismic Behavior of Batter Piles: Elastic Response, 891

Gibb, Alistair G. F.
see Kheni, Nongiba A., 424

Gibbs, M. S.
Comparison of Genetic Algorithm Parameter Setting Methods for Chlorine Injection Optimization, 1988

Gibbs, Matthew S.
Calibration and Optimization of the Pumping and Disinfection of a Real Water Supply System, 2008

Gibney, Amanda
see Tabaković, Amir, 1413

Gibson, David
see Viswanathan, Shekar, 684

Gibson, G. Edward, P.E.
Charrettes as a Method for Engaging Industry in Best Practices Research, 321

Gibson, Stanford
Bridging Process Threshold for Sediment Infiltrating into a Coarse Substrate, 812

Gierke, John S.
see LeFevre, Nancy-Jeanne Bachmann, 1237

Gilani, Amir S. J., SE
Earthquake Simulator Testing and Seismic Evaluation of Suspended Ceilings, 82

Gilbert, David R., P.E.
see Wiltshire, Richard L., P.E., 2256

Gilbert, Douglas C.
Engineering Leadership and Management during Financial Crisis, 2062

Gilbert, J.
see Toutanji, H., 182

Gilchrist, Michael D.
see Tabaković, Amir, 1413

Gill, Tom
see Ho, Jungseok, 968

Gil-Martín, Luisa María
see Aschheim, Mark, 1765

Gin, Karina Yew-Hoong
Sediment Oxygen Demand and Nutrient Fluxes for a Tropical Reservoir in Singapore, 617

Ginger, J. D.
Variation of Internal Pressure with Varying Sizes of Dominant Openings and Volumes, 1737

Giráldez, J. V.
see Castro-Orgaz, O., 960

Giraldo, Diana, P.E.
Washington State's I-405 Project: Women in Industry Leadership, 2073

Giraudet, Sylvain, Ph.D.
Modeling the Temperature Dependence of Adsorption Equilibriums of VOC(s) onto Activated Carbons, 620

Girmscheid, Gerhard
Inter- and Intraorganizational Trust in International Construction Joint Ventures, 349

Gironás, Jorge
Evaluation of Methods for Representing Urban Terrain in Storm-Water Modeling, 1055

Gisi, Andrew J., P.E.
see Gedafa, Daba S., Ph.D., EIT, Aff.ASCE, 1395

Gisonni, Corrado
see Del Giudice, Giuseppe, 1030

Giussani, Francesca, Ph.D.
Displacement Method for the Long-Term Analysis of Steel-Concrete Beams with Flexible Connection, 1633

Giustolisi, O.
Considering Actual Pipe Connections in Water Distribution Network Analysis, 1035

Givehchi, Mohammad
see Maghrebi, Mahmoud F., 2053

Gkikas, Nikolaos
Reset to Zero and Specify Active Safety Systems according to Real-World Needs, 1837

Gkritza, Konstantina
see Anastasopoulos, Panagiotis Ch., 1189

Glasgow, Bob, SE
see Gilani, Amir S. J., SE, 82

Glasnovic, Zvonimir, Ph.D., P.E.
Sustainable Electric Power System: Is It Possible? Case Study: Croatia, 458

Glendinning, S.
Design Framework for Electrokinetically Enhanced Dewatering of Sludge, 659

Glover, Ionela
see Elseifi, Mostafa A., 1490

Gnanendran, C. T.
see Piratheepan, J., 1396

Gnanendran, Carthigesu T., Ph.D.
Determination of Fatigue Life of a Granular Base Material Lightly Stabilized with Slag Lime from Indirect Diametral Tensile Testing, 1867

Godat, A.
Size Effects for Reinforced Concrete Beams Strengthened in Shear with CFRP Strips, 202

Gode, F.
see Atalay, E., 2109

Godin, David
see Morse, Brian, 963

Goel, N. K.
see Sarkar, S., 1121

Goel, Rakesh K.
Simplified Procedure for Seismic Evaluation of Piles with Partial-Moment Connection to the Deck in Marine Oil Terminals, 1660

Goel, Ramesh
see Datta, Tania, 748

Goh, Shu Wei
see Liu, Yu, 1415

Goh, Y. M.
Case-Based Reasoning Approach to Construction Safety Hazard Identification: Adaptation and Utilization, 331

Goi, Anna, Ph.D.
Fenton Process for Landfill Leachate Treatment: Evaluation of Biodegradability and Toxicity, 614

Gokhale, S. S.
see Ghare, A. D., 446

Golab, Alexandra
see Indraratna, Buddhima, 862

Golden, J. S.
see Carlson, J. D., 1360

Golden, Sabrina K., Ph.D.
Immigration and Construction: Analysis of the Impact of Immigration on Construction Project Costs, 1334

Goldsmith, C. Doug
see Thoma, Eben D., 700

Goldstein, Alisha
see Alfredo, Katherine, 1100

Golias, John
see Papadimitriou, Eleonora, 1884
see Papadimitriou, Eleonora, 1887

Gómez, R.
see Hong, H. P., 1684

Gong, Jie
Computer Vision-Based Video Interpretation Model for Automated Productivity Analysis of Construction Operations, 284

Gong, Qiu-Ming
see Du, Xiu-Li, 464

Gong, Yanglin
Plastic Behavior of Shear Tabs Welded to Flexible Wall Support, 1725

Gong, Yongwei, Ph.D.
Effect of Watershed Subdivision on SWAT Modeling with Consideration of Parameter Uncertainty, 1161

González, Vicente
Improving Planning Reliability and Project Performance Using the Reliable Commitment Model, 426

González-Castro, Juan A.
see Muste, Marian, 971

Goodall, Jonathan L.
see Shatnawi, Fadi M., 1067

Goodchild, Anne, Ph.D.
Free and Secure Trade Commercial Vehicle Crossing Times at the Pacific Highway Port of Entry, 1889

Goode, D. J.
see Smith, P. P., 1549

Goodno, Barry, ed.
Improving the Seismic Performance of Existing Buildings and Other Structures, 2259

Goodpasture, David W., P.E.
see Scoble, Kyle P., 1498

Gopalakrishnan, Anuja Padma
see Gin, Karina Yew-Hoong, 617

Gopalakrishnan, Kasthurirangan
Global Optimization of Pavement Structural Parameters during Back-Calculation Using Hybrid Shuffled Complex Evolution Algorithm, 302

Neural Network–Swarm Intelligence Hybrid Nonlinear Optimization Algorithm for Pavement Moduli Back-Calculation, 1844

Gordaninejad, F.
Modular High-Force Seismic Magneto-Rheological Fluid Damper, 1619

Gordon, Rebecca, P.E.
Influence of Surface Condition on the Inspection of Steel Bridge Elements Using the Time-of-Flight Diffraction Method, 157

Gorev, Nikolai B.
see Kovalenko, Yuriy, 977

Gorman, Michael F.
Formulation and Solution Approaches to the Rail Maintenance Production Gang Scheduling Problem, 1863

Gorokhovich, Yuri
Assessment of Mortar and Brick Strength in Earthquake-Affected Structures in Peru Using a Schmidt Hammer, 1560

Gosling, P. D.
see Shaw, A. J., 587

Gosnell, Russell J.
see Alameddine, Ibrahim, 755

Goss, Christoph M, Ph.D., P.E., ed.
GeoTrends: The Progress of Geological and Geotechnical Engineering in Colorado at the Cusp of a New Decade (GPP 6), 2249

Goswami, Rupen
Externally Reinforced Welded I-Beam-to-Box-Column Seismic Connection, 461

Goto, Dustin
Ka Loko Dam Break, 1310

Goto, Yoshiaki
Nonlinear Finite-Element Analysis for Hysteretic Behavior of Thin-Walled Circular Steel Columns with In-Filled Concrete, 1745

Goulet, James-A.
Multimodel Structural Performance Monitoring, 1736

Goupil, Jennifer, P.E.
see Kestner, Dirk M., P.E., 2285

Gourvenec, Susan
Consolidation beneath Circular Skirted Foundations, 14

Governo, Jason
see Beighley, R. Edward, 1245

Govindjee, Sanjay
Stability Analysis of Bay Bridge Saddle Configuration, 1764

Gowda, Bharath
High Displacement Glass Seismic Systems, 2146

Goyal, Radha
Experimental Study on Color Removal from Textile Industry Wastewater Using the Rotating Biological Contactor, 2123

Graber, S. David, P.E.
Generalized Method for Storm-Water Pumping Station Design, 1146
Manifold Flow in Pressure-Distribution Systems, 1576

Graham, Drew A.
Monotonic and Reverse-Cyclic Loading of Lag Screw Connections for Log Shear Wall Construction, 1349
Performance of Log Shear Walls Subjected to Monotonic and Reverse-Cyclic Loading, 1609

Graham-Brady, L.
see Acton, K., 520

Gransberg, Douglas D., Ph.D., P.E.
see Koch, James E., Ph.D., P.E., 2272

Grassl, Peter
Mesoscale Approach to Modeling Concrete Subjected to Thermomechanical Loading, 491

Grasso, Barton
see Rasdorf, William, Ph.D., P.E., 336

Gray, Stephen T.
see Barnett, F. Anthony, 1113

Greco, Thomas J., P.E.
Expert System Software: Use Only as Directed, 2069

Green, Mark F.
see El-Hacha, Raafat, 184

Green, Rebekah
see Franco, Guillermo, 2078

Green, Roger B.
see Thoma, Eben D., 700

Green, Stuart D.
Contextualist Research: Iterating between Methods While Following an Empirically Grounded Approach, 326

Grégoire, Caroline
see Ghostine, Rabih, 992
see Ghostine, Rabih, 1024

Gregoretti, Carlo
Laboratory Experiments on the Failure of Coarse Homogeneous Sediment Natural Dams on a Sloping Bed, 1033

Griffey, Mary E.
see Li, Lungui, 125

Griffin, C.
see Knappett, J. A., 928

Griffis, Lawrence A.
see Vickery, Peter J., 1668

Griffiths, D. V.
see Huang, Jinsong, 814

Grigg, Neil S., Ph.D; P.E.
Economics and Finance for Engineers and Planners: Managing Infrastructure and Natural Resources, 2238

Griggs, Francis E.
C. Shaler Smith, 113
Charles Macdonald, 148
Joseph B. Strauss, Charles A. Ellis, and the Golden Gate Bridge: Justice at Last, 1589
Lewis Wernwag and the Colossus of 1812, 2152
Theodore Burr and the Harrisburg Old Camelback Bridge, 2151

Grigoriu, Mircea
Nearest Neighbor Probabilistic Model for Aluminum Polycrystals, 538

Grimaldi, Giuseppe M.
see Cascini, Leonardo, 894

Groetelaers, Danielle A.
Management of Redeveloped Industrial Areas with Mixed Use in The Netherlands, 1300

Grönlund, Erik, Ph.D.
see Hanæus, Jörgen, Ph.D., 174

Grubb, Dennis G.
Stabilized Dredged Material. I: Parametric Study, 875
Stabilized Dredged Material. II: Geomechanical Behavior, 876
see Chrysochoou, Maria, 823
see Chrysochoou, Maria, 877

Grulkowski, S., Ph.D.
see Koc, W., 1902

Gu, Chaolin
see Su, Weizhong, 1957

Gu, Dong-Sheng
Confinement Effectiveness of FRP in Retrofitting Circular Concrete Columns under Simulated Seismic Load, 230

Gu, Ming
see Hu, Liang, 568

Gu, Ping, P.E.
New Dynamic Participation Factor for Turbine-Generator Foundations, 2135

Gu, Q.
see Barbato, M., 1738

Gu, Quan
see Barbato, Michele, 597

Gu, Tianqi
see Yang, Min, Ph.D., 1874

Guan, Goh Shin
Shear Strength Equations for Unsaturated Soil under Drying and Wetting, 832

Guan, Jiabao
see Aral, Mustafa M., 1959

Guan, Wen-Lin
see Chang, Ray C., 61

Guan, Zhongguo
Performance Test of Energy Dissipation Bearing and Its Application in Seismic Control of a Long-Span Bridge, 153

Gucunski, Nenad
see Hadidi, Rambod, P.E., 1811

Gudavalli, R.
see Lagos, L., 2119

Guha, Hillol
see Chin, David A., 2000

Guidi, Giovanni
see da Porto, Francesca, 1742

Guillama, Vince
see Mitropoulos, Panagiotis, 341

Gül, Ali
Hydrospatial Approach to Assist Decision Making on Reservoir Protection Zones, 1087

Guldan, Steven J.
see Fernald, Alexander G., 1289

Guldmann, Jean-Michel
see Kucukmehmetoglu, Mehmet, 1968

Gullerud, Karl J.
see Muñoz, Jose F., 1350

Gumma, Murali Krishna
see Venot, Jean-Philippe, 1267

Gunarathna, W. P. H.
see Mampearachchi, W. K., 1471

Gunaratne, Manjriker
see Amarasiri, Saumya, 1840
see Fuentes, Luis, 1857

Gunby, Molly
see Kim, Seok, 1187

Güneyisi, Erhan
Strength Deterioration of Plain and Metakaolin Concretes in Aggressive Sulfate Environments, 1385

Guo, H. L., Ph.D.
Life-Cycle Management of Construction Projects Based on Virtual Prototyping Technology, 1321
see Li, Yan, Ph.D., 1944

Guo, Huaicheng
see Zou, Rui, Ph.D., 294

Guo, James C. Y.
Incentive Index Developed to Evaluate Storm-Water Low-Impact Designs, 761
Method of Superimposition for Suction Force on Trash Rack, 1285
Pinning Force during Closure Process at Blocked Pipe Entrance, 1215
Preservation of Watershed Regime for Low-Impact Development through Detention, 1056

Guo, Jianhua
see Zhang, Guimin, 268

Guo, Jia-Wei
see Lixin, Yi, 2081

Guo, Jifu
see Chen, Xumei, 1885

Guo, Shaohui
see Lu, Ronghu, 641

Guo, Shwu-Ping
Impacts of Transportation External Cost Pricing and Transit Fare Reductions on Household Mode/Route Choices and Environmental Improvements, 1954

Guo, Tian-Xiang
see Zhao, Yi, 767

Guo-zhong, Li
Proportioning Design and Mechanical Properties Research of Polypropylene Fiber and Polymer Emulsion Reinforced Cement Mortar, 1364

Gupta, Ajay Kumar
Reliability-Constrained Optimization of Water Treatment Plant Design Using Genetic Algorithm, 647

Gupta, Chetna
see Achari, Gopal, 2105

Gupta, Umesh P.
Enhancing Utility of Submerged Vanes with Collar, 1008

Gurnell, A. M.
see Clifford, N. J., 1050

Gusyev, Maksym
see Haitjema, Henk, 1110

Gutiérrez, Eugenio
Delay Correlation of Mechanical Hysteresis and Damping, 1613

Gutierrez-Padilla, Ma. Guadalupe D.
see Bielefeldt, Angela, 695

Gutierrez-Wing, Maria T.
Anaerobic Biodegradation of Polyhydroxybutyrate in Municipal Sewage Sludge, 693

Gutkowski, Richard M.
Finite-Element Modeling of Short-Term Field Response of Composite Wood-Concrete Floors/Decks, 1677

Guven, Aytac
see Azamathulla, H. Md., 958
see Kisi, Ozgur, 1278

Guymer, Ian
see Stovin, Virginia, 975

Ha, Soojun
see Kwak, Hyo-Gyoung, 1450

Haach, Vladimir G.
Experimental Analysis of Reinforced Concrete Block Masonry Walls Subjected to In-Plane Cyclic Loading, 1653

Haan, F. L.
Tornado-Induced Wind Loads on a Low-Rise Building, 1616

Haanpää, K.-M.
see Sallanko, Jarmo, D.Sc., 173

Haas, Charles N.
see Hoque, Shamia, 685

Haas, Julius, P.E.
Peerless Pier Caps, 2219

Haberland, Marco
see Starossek, Uwe, P.E., 1548

Habib, E.
see AghaKouchak, A., 1084

Haddadpour, H.
see Darbandi, S. M., 506

Hadidi, Rambod, P.E.
Comparative Study of Static and Dynamic Falling Weight Deflectometer Back-Calculations Using Probabilistic Approach, 1811

Hadjab, Hadda
Comparative Study of Acoustic Emission and Scanning Electron Microscope to Evaluate Fracture Process Zone in Concrete Beams, 1473

Hager, Willi H.
Bridge Pier Scour under Flood Waves, 1031
see Heller, Valentin, 2043
see Pfister, Michael, 980
see Pfister, Michael, 981

Haghighat, Fariborz
see El-Sadi, Haifa, 454

Hagos, E. T.
see Molenaar, A. A. A., 1429

Hahn, E. M.
Anomalous Contraction Scour? Vertical-Contraction Case, 955

Haitjema, Henk
Truncating Cross-Sectional Groundwater Models under Wetlands, 1110

Hajek, Milan, Ph.D.
see Kastanek, Petr, Ph.D., 643

Hajj, Elie Y.
Evaluation of the Use of Reclaimed Asphalt Pavement in Airfield HMA Pavements, 1809

Hajjar, Jerome F., P.E.
see Tort, Cenk, P.E., 592
see Tort, Cenk, 1672

Haksever, Cengiz
see Moussourakis, John, 340

Halabe, Udaya B., Ph.D., P.E.
see Hing, C. L. Caleb, Ph.D., P.E., 131

Haldar, Sumanta
Failure Mechanisms of Pile Foundations in Liquefiable Soil: Parametric Study, 19

Hall, Alex
see Jewers, Sam, 1598

Hall, Neil
Experimental Study of Sand and Slurry Jets in Water, 1017
see Cai, Jianan, 577

Hallam, Laura, EIT
see Carpenter, Donald D., Ph.D., P.E., LEED AP, 1096

Haller, Merrick C.
see Lee, Changhoon, 2030

Halles, Felipe A.
see Fu, Pengcheng, 1343

Hallmark, Shauna L.
see Isebrands, Hillary N., P.E., 1891

Hallowell, Matthew R.
Population and Initial Validation of a Formal Model for Construction Safety Risk Management, 412
Qualitative Research: Application of the Delphi Method to CEM Research, 324

Ham, Tae-Gew
Influence of Gravel on the Compression Characteristics of Decomposed Granite Soil, 926
Influence of Water on the Compression Behavior of Decomposed Granite Soil, 842

Hamada, Harold S., P.E.
see Ooi, Phillip S. K., P.E., 95
see Ooi, Phillip S. K., P.E., 96

Hamada, Sumio
see Yoshitake, Isamu, 253

Hamaï, Kamal
see Morse, Brian, 963

Hamed, Ehab
Lateral Out-of-Plane Strengthening of Masonry Walls with Composite Materials, 214

Hamid, A. A.
see Minaie, E., 1715

Hamid, N. H., Ph.D.
Lateral Seismic Performance of Multipanel Precast Hollowcore Walls, 1686

Hamid, R.
Sensitivity of Model Parameter on Dynamic Behavior Simulation of HPC, 1485

Hammad, Amin
see Tan, Xiangyang, 280

Hamroun, B.
see Marcou, O., 1288

Han, Jen-Yu
Noniterative Approach for Solving the Indirect Problems of Linear Reference Frame Transformations, 1784
Rotation- and Translation-Free Estimations of Symmetric, Rank-Two Tensors with a Case Study in LIDAR Surveying, 1768

Han, Ji
Assessment of Policies toward an Environmentally Friendly Urban Transport System: Case Study of Delhi, India, 1926

Han, Jie
see Chen, Bao-guo, Ph.D., 1517
see Puppala, Anand J., ed., 2251

Han, M.
see Toutanji, H., 182

Han, Sang-Mook
see Wu, Xiang-Guo, 141

Han, Seung H.
see Jung, Wooyong, 444
see Wu, Yuhong, 267

Han, W. J., M.S.
see Kim, Yun Tae, Ph.D., 1401

Han, Ying-Hui
see Zhao, Yi, 767

Hanagan, Linda M., P.E.
see Salyards, Kelly A., P.E., 1505

Hancock, Gregory J.
see Pham, Cao Hung, 1693

Hanna, Awad S.
Effect of Preconstruction Planning Effort on Sheet Metal Project Performance, 338
see El Asmar, Mounir, 405

Hansman, R. John
see Bonnefoy, Philippe A., 1898

Hanson, Hans
see Larson, Magnus, 2040

Hanson, James L., Ph.D., P.E.
Compaction Characteristics of Municipal Solid Waste, 882
New Approach for Surface n Factors, 169
Spatial and Temporal Temperature Distributions in Municipal Solid Waste Landfills, 704

Hanæus, Jörgen, Ph.D.
Seasonal Operation of Ponds for Chemical Precipitation of Wastewater, 174

Hao, S., Ph.D.
I-35W Bridge Collapse, 151

Hao, Z.
Evaluation of Masonry Deep Beams Externally Strengthened with CFRP Sheets, 191

Hapij, Adam W., P.E., ed.
Multidisciplinary Assessment of Critical Facility Response to Natural Disasters: The Case of Hurricane Katrina, 2264

Haq, Zia Ul
Irrigation Scheduling with Genetic Algorithms, 1277

Haque, Asadul
see Kodikara, Jayantha, 800
see Wilkinson, Alex, 915

Harajli, M.
Bond Performance of GFRP Bars in Tension: Experimental Evaluation and Assessment of *ACI 440 Guidelines*, 242
Static and Cyclic Out-of-Plane Response of Masonry Walls Strengthened Using Textile-Mortar System, 1475

Harajli, M. H.
Bond Behavior in Steel Fiber-Reinforced Concrete Zones under Static and Cyclic Loading: Experimental Evaluations and Analytical Modeling, 1417

Harb, Rami, Ph.D., P.E.
Empirical Analysis of Toll-Lane Processing Times Using Proportional Odds Augmented MARS, 1900
see Russo, Chris, 1798

Hardy, Richard J.
see Simmons, Stephen M., 945

Hargreaves, Ian
see Harris, Richard, CEng, 2220

Harichandran, Ronald S.
see Iqbal, Shahid, 1758
see Nossoni, Goli, 1375

Harik, Issam E.
see Sun, Liecheng, P.E., 588
see Yuan, Peng, 144

Harja, Maria
see Bărbuţă, Marinela, 1419

Harmancıoğlu, Nilgün
see Gül, Ali, 1087

Harmar, O. P.
see Clifford, N. J., 1050

Harrell, Laura
see Nicklow, John, 2001

Harren, Paul A., ed.
Safe Operation and Maintenance of Dry Dock Facilities, 2275

Harries, Kent
see El-Tawil, Sherif, 2273

Harries, Kent A., Ph.D., P.E.
see El-Tawil, Sherif, Ph.D., P.E., 1683
see Mitch, Derek, 1479

Harris, Devin K.
Flexural Lateral Load Distribution Characteristics of Sandwich Plate System Bridges: Parametric Investigation, 159

Harris, Richard, CEng
Aligned with Nature, 2220

Hart, William E.
Review of Sensor Placement Strategies for Contamination Warning Systems in Drinking Water Distribution Systems, 2021

Hartman, Don
see Stamatiadis, Nikiforos, P.E., 1820

Hartmann, Joseph
see Chin, Joannie, 1460

Hartmann, Timo
Understanding and Managing Three-Dimensional/Four-Dimensional Model Implementations at the Project Team Level, 389

Harty, Chris
Emerging Hybrid Practices in Construction Design Work: Role of Mixed Media, 361

Harvey, G.
see Clifford, N. J., 1050

Harvey, John, Ph.D., P.E.
see Choi, Jae Woong, 1790

Harvey, John T., Ph.D., P.E.
see Fu, Pengcheng, 1343
see Fu, Pengcheng, 1453

Harvey, Judson W.
see O'Connor, Ben L., 1049

Hasan, A. S. M. Z.
see Hamid, R., 1485

Hasan, Alsidqi
Discrete Element Modeling of Strength Properties of Johnson Space Center (JSC-1A) Lunar Regolith Simulant, 57

Hasan, Shafiul
Interactive and Dynamic Integrated Module for Mobile Cranes Supporting System Design, 332

Hasançebi, Oğuzhan
Adaptive Harmony Search Method for Structural Optimization, 1650

Haselbach, Liv M.
Potential for Clay Clogging of Pervious Concrete under Extreme Conditions, 1063

Hashash, Youssef M. A., .Ph.D., P.E., ed.
see Finno, Richard, .Ph.D., P.E., ed., 2237
see Osouli, Abdolreza, 781

Hashem, F. S.
see Hekal, Eisa E., 2124

Hashimoto, Toshikazu
Contribution of the Estrogen-Degrading Bacterium *Novosphingobium* sp. Strain JEM-1 to Estrogen Removal in Wastewater Treatment, 711

Hashmonay, Ram A.
see Thoma, Eben D., 700

Haskett, Matthew
Analysis of Moment Redistribution in Fiber-Reinforced Polymer Plated RC Beams, 219

Hassan, Almoutaz A.
see Sharif, Hatim O., 1120

Hassan, Marwa M.
Quantification of the Environmental Benefits of Ultrafine/Nanotitanium Dioxide Photocatalyst Coatings for Concrete Pavement Using Hybrid Life-Cycle Assessment, 1179

Hassan, Mohammad
see El-Tawil, Sherif, 2273

Hastak, Makarand
see Bayraktar, Mehmet Emre, 410

Hastings, John S., P.E.
Steel Girder Stability during Bridge Erection: AASHTO LRFD Check on L/b Ratios, 167

Hatch,, Henry J., P.E.
Special Report: The Infrastructure Roundtables: Concluding Thoughts— Increase Federal Leadership In Infrastructure, 2180

Hater, Gary R.
see Thoma, Eben D., 700

Hathaway, J. M.
Evaluation of Storm-Water Wetlands in Series in Piedmont North Carolina, 624
Statistical Evaluation of Factors Affecting Indicator Bacteria in Urban Storm-Water Runoff, 763
see Bright, T. M., 772
see Hunt, W. F., 1105

Hathaway, Jon M.
see Collins, Kelly A., 1107

Hauck, Larry
see Eck, Bradley, 1272

Haukaas, T.
see Koduru, S. D., 1630

Hauksdottir, Heidrun O.
see Berman, Jeffrey W., 1662

Havaldar, Sanjay N.
Experimental Study of Particle Motion on a Smooth Bed under Shoaling Waves Using Particle Image Velocimetry, 543

Hawileh, R.
Evaluation of the Low-Cycle Fatigue Life in ASTM A706 and A615 Grade 60 Steel Reinforcing Bars, 1347

Hayashi, Yoshitsugu
see Han, Ji, 1926

Hayat, T.
see Sajid, M., 47

Haymaker, John
see Gane, Victor, 87

Hazra, B.
Modified Cross-Correlation Method for the Blind Identification of Structures, 545

He, Chunmei
see Zeng, Xiangwu, 51
see Zeng, Xiangwu, 63

He, Guojian
see Fang, Hongwei, 953

He, Jianxun
Characterizing Physicochemical Quality of Storm-Water Runoff from an Urban Area in Calgary, Alberta, 745

He, Leqia
see Bursi, Oreste S., 596

He, Li
see Zhang, Yi Mei, 670

He, Minjuan
see Song, Xiaobin, Ph.D., 1679

He, Peng
see Zhao, Yi, 767

He, Qiang, ed.
Geoenvironmental Engineering and Geotechnics (GSP 204), 2246

He, Siming
see Li, Xinpo, 860

He, W. F.
see Yang, Q. R., 501

He, Xianfei
see Fraser, Michael, 263

He, Zhi-Qi
Stresses in External and Internal Unbonded Tendons: Unified Methodology and Design Equations, 1712

Head, Monique Hite
see Mander, Thomas J., 142

Healey, Sean T.
see Coffelt, Donald P., 86

Heaney, James P.
see Lee, Joong Gwang, 1983

Hearn, Douglas C., P.E.
see Colwell, Arthur B., P.E., 2195

Heath, Ronald
see Gibson, Stanford, 812

Hegab, Mohamed Y., P.E.
Ranking of the Factors Affecting Productivity of Microtunneling Projects, 1566

Hegazy, Tarek
Critical Path Segments Scheduling Technique, 421
see Kassab, Moustafa, Ph.D., 438
see Yousefi, Saied, 1315
see Yousefi, Saied, 1328

Heidarpour, Amin
Nonlinear Analysis of Composite Beams with Partial Interaction in Steel Frame Structures at Elevated Temperature, 1703

Heidarpour, Manouchehr
see Mohammadzadeh-Habili, Jahanshir, 1137

Heikin, Steven A., A.I.A
Locked or Liberated: East Somerville, a Transit-Oriented Development Opportunity, 2067

Heineck, Karla Salvagni, D.Sc.
see Silva dos Santos, Ana Paula, D.Sc., 861

Heitzman, Michael
see Chen, Don, 1523
see Kim, Jungyong "Joe", 1522

Hekal, Eisa E.
Chromium (III) Immobilization and Its Influence on C_3S Hydration, 2124

Hekimoglu, S.
Increasing the Efficacy of the Conventional Deformation Analysis Methods: Alternative Strategy, 1773

Heller, Valentin
Impulse Product Parameter in Landslide Generated Impulse Waves, 2043

Hellmich, C.
see Pichler, B., 562

Hellmich, Christian
see Sanahuja, Julien, Ph.D., 483

Helwig, Todd
see Yura, Joseph, 6

Hemsi, Paulo S., Ph.D.
Calibration of Reactive Transport Models for Remediation of Mine Drainage in Solid-Substrate Biocolumns, 714

Henderson, David J.
see Kopp, Gregory A., 2093

Henderson, J. F.
see Botros, K. K., 1562

Hendrickson, Chris
see Blackhurst, Michael, P.E., 91

Hendrickson, Chris T.
see Coffelt, Donald P., 79
see Coffelt, Donald P., 86

Henine, Hocine
see Nédélec, Yves, Ph.D., 1223

Henley, Matthew D.
see Mander, Thomas J., 142

Henn, Raymond W., Ph.D., P.E.
Ultrafine Cement in Pressure Grouting, 2292

Henrique de Oliveira, Fernando
see Faria, Marco Tulio C., 1038

Henriquez, Nicholas R.
see Miachin, R. Edward, 343

Henry, Richard S.
Concept and Finite-Element Modeling of New Steel Shear Connectors for Self-Centering Wall Systems, 481

Henshaw, Carl Glen
Variational Technique for Spacecraft Trajectory Planning, 56

Heo, Seo-Young
see Lee, Chadon, P.E., 226

Herbert, Bruce
see Little, Dallas N., P.E., 784

Herbstová, Vladislava
see Herle, Ivo, 1541

Herencia, J. Enrique
Closed-Form Solutions for Buckling of Long Anisotropic Plates with Various Boundary Conditions under Axial Compression, 569

Herle, Ivo
Geotechnical Problems of Cultural Heritage due to Floods, 1541

Herman, Reagan
see Yura, Joseph, 6

Hermann, U. H., P.E.
see Hasan, Shafiul, 332

Hernáinz, F.
see Martín-Lara, M. A., 766

Hernandez, Mark
see Bielefeldt, Angela, 695

Hernández-Montes, Enrique
see Aschheim, Mark, 1765

Herr, Joel W.
see Chen, Carl W., 651

Herrmann, Andrew, P.E.
Special Report: The Infrastructure Roundtables: Concluding Thoughts—Chairman's Summary, 2179
Special Report: The Infrastructure Roundtables: Concluding Thoughts—Develop Federal, Regional, and State Infrastructure Plans, 2182

Herrmann, H. J.
see Masoero, E., 556

Hess, Daniel
see Fuentes, Luis, 1857

Hession, W. C.
see Kozarek, J. L., 1053

Hession, W. Cully
see Resop, Jonathan P., 1023

Hewitson, Steve, Ph.D.
Extended Receiver Autonomous Integrity Monitoring (eRAIM) for GNSS/INS Integration, 1767

Hey, Richard D.
see Bhuiyan, Faruk, 1002

Heydari, Nader, P.E., LEED AP
see Gowda, Bharath, 2146

Heyvaert, A. C., Ph.D.
see Bachand, P. A. M., Ph.D., 746

Hidalgo, Ieda G., Ph.D.
Data Consolidation from Hydroelectric Plants, 456

Hien, Wong Nyuk
Air Temperature Distribution and the Influence of Sky View Factor in a Green Singapore Estate, 1946

Higgins, Christopher
Comparison of Block-Shear and Whitmore Section Methods for Load Rating Existing Steel Truss Gusset Plate Connections, 110
Rapid Ranking Procedures for Gusset Plate Connections in Existing Steel Truss Bridges, 149

Higgins, Christopher C.
see Schumacher, Thomas, 1839

Highway Innovative Technology Evaluation Center (HITEC)
Evaluation of Stone Strong Gravity Wall System by Stone Strong Systems: Final Report, 2242

Hiley, R. A.
see Shaw, A. J., 587

Hill, Benjamin M.
see McCrary, Steven W., P.E., 1303

Hill, David
see Jewers, Sam, 1598

Hill, Howard J.
Certifying That Existing Suspended Scaffold Structural Support Elements and Lifeline Anchorages Comply with Federal OSHA Requirements, 2149
Designing Suspended Scaffold Structural Support Elements and Lifeline Anchorages in Conformance with Federal OSHA Requirements, 2148

Hill, Julian R.
see Gkikas, Nikolaos, 1837

Hill, Peter G.
see Hoult, Neil A., 109

Hiller, Jacob E.
Simplified Nonlinear Temperature Curling Analysis for Jointed Concrete Pavements, 1858

Hillig, Jan-Bertram
Impact of the EU Mediation Directive on the German Construction Sector, 1307

Himes, Scott C.
Speed Prediction Models for Multilane Highways: Simultaneous Equations Approach, 1880

Hindman, Daniel P.
Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. I: NDS Design Equations, 1482
Strength of Sawn Lumber and Wood Composite Dowel Connections Loaded Perpendicular to Grain. II: Fracture Mechanics Equations, 1483

Hing, C. L. Caleb, Ph.D., P.E.
Nondestructive Testing of GFRP Bridge Decks Using Ground Penetrating Radar and Infrared Thermography, 131

Hipel, Keith
see Kassab, Moustafa, Ph.D., 438

Hipel, Keith W.
see Bernath Walker, Sean, 1945
see Yousefi, Saied, 1315
see Yousefi, Saied, 1328

Hires, Richard I.
see Jagupilla, Sarath Chandra K., 687

Hirose, Sohichi
see Shah, Abid A., 1394

Hirt, Christian
Modern Determination of Vertical Deflections Using Digital Zenith Cameras, 1766

Hitaka, Toko
see Chung, Yu-Lin, 1670

Hitchcock, G.
see Gordaninejad, F., 1619

Hlaing, Myat Marlar
Response of Spiral-Reinforced Lightweight Concrete to Short-Term Compression, 1491

Ho, Chih-Chao
see Chang, Liang-Cheng, 2013

Ho, Jungseok
Case Study: Movable Bed Model Scaling for Bed Load Sediment Exclusion at Intake Structure on Rio Grande, 968

Ho, Lionel
Granular Activated Carbon Adsorption of 2-Methylisoborneol (MIB): Pilot- and Laboratory-Scale Evaluations, 718

Ho, Manfong
see Yang, Jing, 391

Ho, Paul H. K.
Forecasting Construction Manpower Demand by Gray Model, 443

Ho, Wei-Ming
see Liao, Tsai-Yun, 1897

Ho, Yeek Chia
Reuse of Fruit Waste as Biopolymeric Flocculant and Optimizing Turbidity Reduction: Comparison Study with Industrial Flocculant, 752

Hoan, Le Xuan
see Larson, Magnus, 2040

Hoang, Vivian To Phuong
see Ling, Florence Yean Yng, 1597

Hobeika, Antoine G.
see Lee, Kwang-Sub, Ph.D., 1875

Hodaifa, Gassan
see Nieto, Leopoldo M., 757

Hodder, M. S.
Analysis of Soil Strength Degradation during Episodes of Cyclic Loading, Illustrated by the T-Bar Penetration Test, 23

Hodgson, Ian
see Naito, Clay, 133

Hodgson, Ian C.
see Warpinski, Margaret K., 1639

Hoel, Lester A., P.E.
see Miller, John S., P.E., 1952

Hoffman, Daniel E.
Preventing Sewer Blowouts during High-Velocity Jet Cleaning Operations, 1191

Hoffmans, Gijs J. C. M.
Stability of Stones under Uniform Flow, 954

Ho/gsberg, J.
see Weber, F., 1618

Hohn, Keith
see Bhandari, Alok, 738

Hoit, Marc, Ph.D., ed.
see Senapathi, Sivaji, P.E. ed., 2225

Holický, Milan
Assessment of Flooding Risk to Cultural Heritage in Historic Sites, 1539

Holmes, Hillary
see Reichold, Laurel, 1996

Holmes, J. D.
see Ginger, J. D., 1737

Homleid, Tanya, P.E.
The Art of Parking, 2211

Hondzo, Miki
see O'Connor, Ben L., 1049

Hong, Feng
Roughness Model Accounting for Heterogeneity Based on In-Service Pavement Performance Data, 1812
see Prozzi, Jorge A., 1175

Hong, H. P.
Impact of Different Earthquake Types on the Statistics of Ductility Demand, 1684

Hong, Han Ping
see Kopp, Gregory A., 2093

Hong, Jong-Kook
see Uang, Chia-Ming, 1701

Hong, Jung-Pyo, Ph.D.
Three-Dimensional Finite-Element Modeling of Nailed Connections in Wood, 1678

Hong, Seung-Seo
see Christ, Martin, 1449

Hong, TaeHoon
see Cho, KyuMan, 1319

Hong, Taehoon
see Cho, Kyuman, 1325

Hong, TaeHoon
see Ji, ChangYoon, 1338

Hoor, A.
see Rowe, R. Kerry, 703

Hoover, Christian G.
see Yu, Qiang, 463

Hoque, Shamia
Multiple Linear Regression Model Approach for Aerosol Dispersion in Ventilated Spaces Using Computational Fluid Dynamics and Dimensional Analysis, 685

Horhota, David
see Klammler, Harald, 884

Horman, Michael
see Klotz, Leidy, 373
see Korkmaz, Sinem, 402

Horman, Michael J., Ph.D.
see Phelps, Andreas F., Ph.D., P.E., 320

Hornych, Pierre
see Allou, Fatima, 600

Horta, Isabel M.
Performance Assessment of Construction Companies Integrating Key Performance Indicators and Data Envelopment Analysis, 372

Horvath, John S., Ph.D., P.E.
Emerging Trends in Failures Involving EPS-Block Geofoam Fills, 1532

New Structural Model for Multicomponent Pile Cross Sections under Axial Load, 859
see Colasanti, Regis J., P.E., 2157

Hös, Csaba
see Bene, József Gergely, 1972

Hossain, Azam
see Barlaz, Morton A., 707

Hossain, Faisal
Empirical Relationship between Large Dams and the Alteration in Extreme Precipitation, 2087
see Boynton, Matthew, 1604

Hossain, K. M. A., Ph.D., P.E.
Fresh, Mechanical, and Durability Characteristics of Self-Consolidating Concrete Incorporating Volcanic Ash, 1414

Hossain, Md. Akhtar
Behavior of a Compacted Completely Decomposed Granite Soil from Suction Controlled Direct Shear Tests, 791

Hossain, Md. Aslam
Autogeneration of Simulation Network of the Design Process, 303

Hossain, Mustaque, Ph.D., P.E.
see Gedafa, Daba S., Ph.D., EIT, Aff.ASCE, 1395
see Gedafa, Daba S., Ph.D., 1826

Hotz, Robert D.
Investigation of the Thermal Conductivity of Compacted Silts and Its Correlation to the Elastic Modulus, 1386

Houle, James
see Avellaneda, Pedro, 616

Hoult, Neil A.
Long-Term Wireless Structural Health Monitoring of the Ferriby Road Bridge, 109

Houston, Sandra L.
see Travis, Quentin B., 869

Howes, Daniel J.
Subcritical Contraction for Improved Open-Channel Flow Measurement Accuracy with an Upward-Looking ADVM, 1269

Howitt, Richard E.
see Marques, Guilherme Fernandes, 1998

Hoyos, Laureano R., ed.
Experimental and Applied Modeling of Unsaturated Soils (GSP 202), 2243
see Puppala, Anand J., ed., 2251

Hsiao, Shih-Chun
Extended Boussinesq Equations for Water-Wave Propagation in Porous Media, 521

Hsieh, Chu-Chin
see Jiang, Pan, 743

Hsieh, W. D.
see Wu, Y. L., 2121

Hsu, Chaug-Ing
see Guo, Shwu-Ping, 1954

Hsu, S. P.
see Wu, Y. L., 2121

Hsu, Yin-Sung
Densimetric Monitoring Technique for Suspended-Sediment Concentrations, 949

Hsuan, Y. G.
see Rowe, R. Kerry, 803

Hu, I-Chou
Method of Up-Slope Mitigation Priority for Alishan Mountain Road in Taiwan, 1533

Hu, J.
Plane-Strain Propagation of a Fluid-Driven Crack in a Permeable Rock with Fracture Toughness, 574

Hu, Jianhua
see Shao, Xudong, 104

Hu, Kai-Cheng
see Hsiao, Shih-Chun, 521

Hu, Liang
Error Assessment for Spectral Representation Method in Wind Velocity Field Simulation, 568
see Yu, Jianying, 1430

Hu, Sheng
see Hu, Xiaodi, 1843
see Zhou, Fujie, 1827

Hu, Ta-Yin
see Liao, Tsai-Yun, 1897

Hu, Xian-Qi
see Wu, Gang, 1462

Hu, Xiaodi
Proposed Loading Waveforms and Loading Time Equations for Mechanistic-Empirical Pavement Design and Analysis, 1843
see Zhou, Fujie, 1827

Hu, Xiaozhi
Mechanism behind the Size Effect Phenomenon, 465
see Wu, Zhimin, 580

Hu, Xiuqing
see Cai, Yuanqiang, 497

Hu, Yafei
AC Pipe in North America: Inventory, Breakage, and Working Environments, 1581

Hu, Yu
see Chen, Zhangfusheng, 496

Hu, Yu-Gang
see Ching, Jianye, 581

Hu, Yuxia
see Wang, Dong, 808

Hu, Zhaozheng
see Tsai, Yichang (James), 1814

Hua, X. G.
see Zhang, Z. T., 155

Huaizhi, Zhang
see Yunquan, Liu, 1432

Huan, Wee Tiong
see Hlaing, Myat Marlar, 1491

Huang, Baoshan
Evaluation of Longitudinal Joint Construction Techniques for Asphalt Pavements in Tennessee, 1468

Laboratory Evaluation of Moisture Susceptibility of Hot-Mix Asphalt Containing Cementitious Fillers, 1416
Paving Materials and Pavement Analysis (GSP 203), 2267

Huang, Chung-Ho
see Chen, How-Ji, 1408

Huang, De-Yuan
see Chen, Jieh-Haur, 432

Huang, G. H.
see Li, Y. P., 279
see Lin, Q. G., Ph.D., P.Eng., 1939

Huang, Guo He
see Zhang, Yi Mei, 670

Huang, Guohe
see Lu, Ronghu, 641

Huang, Guoqing
see Chen, Xinzhong, 532

Huang, H. B.
Removal of Toluene Using UV-Irradiated and Nonthermal Plasma–Driven Photocatalyst System, 747

Huang, Hai
see Shen, Shihui, 1438

Huang, Haijun, ed.
see Mao, Baohua, ed., 2289

Huang, Hao, Ph.D.
see Song, Xiaobin, Ph.D., 1679

Huang, Hong-Ming, Ph.D.
see Lin, Chien-Liang, Ph.D., 351

Huang, Hongun
see Lee, Chien-Li, Ph.D., 658

Huang, Hongwei
see Li, Zhihong, 933

Huang, Jiansheng
see Lin, Zhenzhi, 451

Huang, Jianwei
Environmental Reduction Factors for GFRP Bars Used as Concrete Reinforcement: New Scientific Approach, 225

Huang, Jie, ed.
see Puppala, Anand J., ed., 2251

Huang, Jinsong
Probabilistic Analysis of Coupled Soil Consolidation, 814

Huang, Jun
see Ning, Ping, 770

Huang, L. H.
see Wang, C. H., 575

Huang, Li-zhi
see Wang, Zong-ping, 626

Huang, Maosong, ed.
Soil Dynamics and Earthquake Engineering (GSP 201), 2281
see Lu, Xilin, 561

Huang, Peiji
see Liu, Xinan, 2041

Huang, Qindan
Probabilistic Seismic Demand Models and Fragility Estimates for Reinforced Concrete Highway Bridges with One Single-Column Bent, 593

Huang, Teng
Precise Control Survey for Erecting the Steel Pylons of the Third Nanjing Yangtze River Bridge, China: Case Study, 1769

Huang, X.
see Ma, G. W., 1667

Huang, Xiaosheng
see Wang, Tao, 1428
see Wei, Jianming, 1426

Huang, Xiaoxue
see Xu, Rui, 2102

Huang, Y. F., Ph.D., P.Eng.
see Lin, Q. G., Ph.D., P.Eng., 1939

Huang, Yi-Min
see Mayfield, Roy T., 787

Huang, Ying-Hua
Artificial Neural Network Model of Bridge Deterioration, 1556

Huang, Yongtai
Multiobjective Water Quality Model Calibration Using a Hybrid Genetic Algorithm and Neural Network–Based Approach, 724

Huang, Yu, ed.
see Huang, Maosong, ed., 2281

Huang, Yuli, Ph.D.
see Storesund, Rune, D.Eng., P.E., G.E., 2045

Huang, Zhaohui
see Yu, Chaoming, Ph.D., 1634

Huang, Zhi Wei
see Li, Bing, 1669

Huawen, Ye
Fatigue Performance of Tension Steel Plates Strengthened with Prestressed CFRP Laminates, 237

Hubbard, K. G
see Sridhar, V., 1064

Hubbard, Kenneth G.
see You, Jinshing, 1076

Hubbard, Sarah M. L.
Right Turns on Green and Pedestrian Level of Service: Statistical Assessment, 1

Huda, Zainul
Temperature Effects on Material Behavior of Aerospace Aluminum Alloys for Subsonic and Supersonic Aircraft, 53

Hueste, Mary Beth D., Ph.D., P.E.
see Kim, Young Hoon, Ph.D., 1705
see Pillai, Radhakrishna G., 1451

Huhn, Martin, MM
see Hillig, Jan-Bertram, 1307

Humar, Jag
see Bagchi, Ashutosh, 1510

Hummer, Joseph E., Ph.D., P.E.
see Zhang, Guanghua, M.S., 1871

Hundecha, Yeshewatesfa, Ph.D.
see Klein, Bastian, Ph.D., 1092

Hunsaker, D. J.
see French, A. N., 1225

Hunsaker, Douglas J.
see Perea, Hugo, 1241

Hunston, Donald
see Chin, Joannie, 1460

Hunt, Beatrice E., ed.
see Burns, Susan E., ed., 2276

Hunt, D. V. L.
see Glendinning, S., 659

Hunt, J. D.
see Mir, M. S., 1925

Hunt, John Douglas
see Zhong, Ming, 1817

Hunt, W. F.
Runoff Volume Reduction by a Level Spreader–Vegetated Filter Strip System in Suburban Charlotte, N.C., 1105
see Hathaway, J. M., 624
see Hathaway, J. M., 763

Hunt, W. F.
see Bright, T. M., 772

Hunt, William F., P.E.
see Collins, Kelly A., 1107
see Jones, Matthew P., 1273
see McNett, Jacquelyn K., 673

Hunt, William F., P.E.
see Brown, Robert A., 1094

Hunter, Samuel T.
see Leicht, Robert M., 322

Huo, Jinsheng
Application of Two-Directional Time Series Models to Replace Missing Data, 661

Hurlebaus, Stefan
see Huang, Qindan, 593
see Kim, Yeesock, 1708

Husband, S.
Field Studies of Discoloration in Water Distribution Systems: Model Verification and Practical Implications, 618

Hussain, Manzoor
see Stark, Timothy D., 868

Hussain, Naeem, CEng
see Kite, Steve, CEng, 2213

Hussain, Syed A.
see Kumar, Harjinder, 649

Hussein, Mohamad H., ed.
Art of Foundation Engineering Practice (GSP 198), 2226

Hussein, Mohamed
Structural Performance of CFRP-Strengthened RC Slabs in a Corrosive Environment, 261

Hussin, Mohd Warid
Effect of Mixing Constituent toward Engineering Properties of POFA Cement-Based Aerated Concrete, 1372

Hutchinson, Tara C.
see Olsen, Michael J., 285
see Raychowdhury, Prishati, 827

Hutson, Alan, P.E.
Drilling Under DFW, 2193

Huynh, Nathan, Ph.D.
see Xie, Yuanchang, Ph.D., 1911

Hwang, Hey-Zoo
see Yang, Keun-Hyeok, 1443

Hwang, Seokyon
Contemporaneous Time Series and Forecasting Methodologies for Predicting Short-Term Productivity, 418

Cross-Validation of Short-Term Productivity Forecasting Methodologies, 417

Hwang, Sungjoo
see Park, Moonseo, 383

Hwung, Hwung-Hweng
see Hsiao, Shih-Chun, 521

Hyodo, Masayuki
see Ham, Tae-Gew, 842
see Ham, Tae-Gew, 926

Hyun, ChangTaek
see Cho, KyuMan, 1319

Hyun, Changtaek
see Cho, Kyuman, 1325

Hyun, ChangTaek
see Ji, ChangYoon, 1338

Ibbs, William
see Nguyen, Long D., 397
see Nguyen, Long D., 439

Ibrahim, Noor-Akma
see Arabkhedri, Mahmood, 1071

Ichinomiya, Toshimichi
see Imai, Michio, 1706

Iervolino, Michele
see Di Cristo, Cristiana, 943

Ilki, A.
see Comert, M., 1528
see Ispir, M., 1420

Ilki, Alper, Ph.D.
see Demir, Cem, 190

Imai, Michio
Crack Detection Application for Fiber Reinforced Concrete Using BOCDA-Based Optical Fiber Strain Sensor, 1706

Imamoglu, Baris
see Leshchinsky, Dov, 902

Imberger, J.
see Patil, S., 1115

Impollonia, Nicola
Dynamic Behavior of Stay Cables with Rotational Dampers, 528

Indraratna, B.
see Oliveira, D. A. F., 858

Indraratna, Buddhima
Class A Prediction of the Behavior of Soft Estuarine Soil Foundation Stabilized by Short Vertical Drains beneath a Rail Track, 841
Experimental and Numerical Study of Railway Ballast Behavior under Cyclic Loading, 26
Field Assessment of the Performance of a Ballasted Rail Track with and without Geosynthetics, 863
Performance of a PRB for the Remediation of Acidic Groundwater in Acid Sulfate Soil Terrain, 862
see Ghandeharioon, Ali, 17
see Trani, Laricar Dominic O., 916
see Trani, Laricar Dominic O., 921

Ingham, Jason M.
see Henry, Richard S., 481
see Zhang, Wentao, 1390

Ingle, R. N.
see Ghare, A. D., 446

Ingólfsson, Einar Thór
see Živanović, Stana, 1735

Inui, Toru
see Plata, Hermelinda, 699

Ioannou, Photios G.
Below-Average Bidding Method, 408

Iqbal, Shahid
Capacity Reduction and Fire Load Factors for Design of Steel Members Exposed to Fire, 1758

Irani, Zahir
see Love, Peter E. D., 379

Irizarry-Ortiz, Michelle, P.E.
see Park, Joseph, P.E., 2061

Irshidat, Mohammad
see Al-Ostaz, Ahmed, 1354

Irving, Ken
see Toniolo, Horacio, 1040

Irwin, Peter A.
see Vickery, Peter J., 1668

Isaacson, Michael
see Liu, Joan C., 2035

Isebrands, Hillary N., P.E.
Roadway Lighting Shows Safety Benefits at Rural Intersections, 1891

Isik, Zeynep
Impact of Resources and Strategies on Construction Company Performance, 1318

Iskander, Magued, Ph.D., P.E.
Outreach to K–12 Teachers: Workshop in Instrumentation, Sensors, and Engineering, 1592
see Bozorg-Haddad, Amir, Ph.D., 1488

Islam, M. Z.
see Rowe, R. Kerry, 803
see Rowe, R. Kerry, 865

Ismael, Nabil F.
Behavior of Step Tapered Bored Piles in Sand under Static Lateral Loading, 839

Ismail, Norli
see Ho, Yeek Chia, 752

Ismail, Sherine S.
see Dawod, Gomaa M., 1770

Isoda, H.
see van de Lindt, John W., 1732

Ison, Stephen G.
see Quddus, Mohammed A., 1833

Ispir, M.
Material Characterization of the Historical Unreinforced Masonry Akaretler Row Houses in Istanbul, 1420

Issa, Raja R. A.
see Flood, Ian, 318

Itani, Ahmad M.
see Dusicka, Peter, 1645

Iudicello, Jeffrey J.
see Chin, David A., 2000

Ivanova, Jordanka
Interface Behavior of a Bimaterial Plate under Dynamic Loading, 579

Iwanami, Mitsuyasu
see Dai, Jian-Guo, 258

Iyer, K. C.
Hierarchical Structuring of PPP Risks Using Interpretative Structural Modeling, 329

Jaafar, H. H.
High-Resolution Method for Modeling Hydraulic Regime Changes at Canal Gate Structures, 1287

Jacobs, Jennifer M.
see Ray, Ram L., 914

Jadlocki, S. J.
see Hunt, W. F., 1105

Jafari, Siroos
see Albaji, Mohammad, 1213

Jagupilla, Sarath Chandra K.
Multivariate Polynomial Time-Series Models and Importance Ratios to Qualify Fecal Coliform Sources, 687

Jahren, Charles T.
see Chen, Don, 1523
see Kim, Jungyong "Joe", 1522
see Mekkawy, Mohamed M., Ph.D., 1511

Jain, Kamal Kant
see Mitra, Gopal, 1552

Jaiswal, C. S.
see Singh, Surjeet, 1255

Jaiswal, Sumeet
Influence of Platform Walking on BRT Station Bus Dwell Time Estimation: Australian Analysis, 1915

Jakher, Aarti
see Achari, Gopal, 2105

Jaligama, Gopi K.
see Cerucci, Marcelo, 11
see Cerucci, Marcelo, Ph.D., 723

James, Ryan
see Niemitz, Carl W., 194

Jampel, Gempo
see Singh, Amarjit, 1333

Jamtsho, S.
see Lichti, D. D., 1779

Jan, Chyan-Deng
Discharge Coefficient for a Water Flow through a Bottom Orifice of a Conical Hopper, 1264

Jana, R.
see Reshmidevi, T. V., 1242

Janardhanam, R., Ph.D., ed.
see Chen, Shen-En, Ph.D.; P.E., ed., 2260

Jang, Dong-Doo
see Jung, Hyung-Jo, 484

Jang, Gang-Won
Fully Coupled 10-Degree-of-Freedom Beam Theory for Piecewise Straight Thin-Walled Beams with General Quadrilateral Cross Sections, 1762

Janoyan, Kerop D., P.E.
see Whelan, Matthew J., 150

Jarkas, Abdulaziz M., Ph.D., P.Eng.
Critical Investigation into the Applicability of the Learning Curve Theory to Rebar Fixing Labor Productivity, 441

Jaspart, Jean-Pierre
see Rossi, Barbara, 1643
see Rossi, Barbara, 1644

Jaturapitakkul, Chai
see Makaratat, Nattapong, 1474
see Sata, Vanchai, 1459
see Tangchirapat, Weerachart, 1404

Jáuregui, David V., P.E.
Higher Level Evaluation of a Reinforced Concrete Slab Bridge, 111

Javernick-Will, Amy
Mobilizing Institutional Knowledge for International Projects, 357

Javernick-Will, Amy N.
Who Needs to Know What? Institutional Knowledge and Global Projects, 369

Javier, Julie Rose N.
Flash Flooding in the Philadelphia Metropolitan Region, 1058

Jayabalan, P.
see Suneel Kumar, M., 2138

Jayakumar, S.
Detrimental Effects on Coastal Concrete Structures by *Chaetomorpha Antennina*, 1440

Jella, Kiran
see Venot, Jean-Philippe, 1267

Jenkins, Jennifer K. Gilbert
Fines Accumulation and Distribution in a Storm-Water Rain Garden Nine Years Postconstruction, 1292

Jenkins, W. Aaron
see Elsin, Yoanna Kraus, 2006

Jennings, Aaron A., Ph.D., P.E.
Analysis of Regulatory Guidance Values for Residential Surface Soil Arsenic Exposure, 709

Jeong, Jaehak
Diffusion Wave Model for Simulating Storm-Water Runoff on Highway Pavement Surfaces at Superelevation Transition, 1020

Jeong, Y.-S.
see Eastman, C. M., 264

Jepsen, Richard
Effects of Bed Load and Suspended Load on Separation of Sands and Fines in Mixed Sediment, 2058

Jergeas, George F., Ph.D., P.E.
Why Cost and Schedule Overruns on Mega Oil Sands Projects?, 2132

Jewers, Sam
Education for Sustainable Development and Civil Engineering for Children: Interactive Model Case Study, 1598

Jha, B. K.
see Viswanadham, B. V. S., 1392

Ji, ChangYoon
CBR Revision Model for Improving Cost Prediction Accuracy in Multifamily Housing Projects, 1338

Ji, Sae-Hyun
Data Preprocessing–Based Parametric Cost Model for Building Projects: Case Studies of Korean Construction Projects, 399

Jia, Yangwen
see Qiu, Yaqin, Ph.D., 1969

Jian, Cheng, Ph.D.
Dynamic Model of an Astronaut Equipped with a Manned Maneuvering Unit in Virtual Reality, 55

Jian, Ming, ed.
see Zhang, Jin, ed., 2258

Jiang, Hongtao
Engineering Properties of Soils Reinforced by Short Discrete Polypropylene Fiber, 1493

Jiang, Minwei
see Huang, Teng, 1769

Jiang, Pan
Modeling VOC Emissions in the High-Purity Oxygen Activated Sludge Process, 743

Jiang, Shoudong
see Fang, Xing, P.E., 948

Jiang, Shufang
Evaluation of Microirrigation Uniformity on Laterals Considering Field Slopes, 1248
Simple Method for the Design of Microirrigation Paired Laterals on Sloped Fields, 1230

Jiang, Xin
Bridge Health Index for the City and County of Denver, Colorado. I: Current Methodology, 1554
Bridge Health Index for the City and County of Denver, Colorado. II: Denver Bridge Health Index, 1555

Jiang, Yan
see Huo, Jinsheng, 661

Jianlong, Wang
see Can, Chen, 619

Jie, Liu
see Qingsong, Wei, 1228

Jie, Wang
see Lixin, Yi, 2081

Jiménez, R.
see Jurado-Piña, R., 1846

Jin, Eui-Jae
see Madanat, Samer, 1193

Jin, Xianyu
see Zheng, Jianjun, 1478

Jin, Xiao-Hua
Determinants of Efficient Risk Allocation in Privately Financed Public Infrastructure Projects in Australia, 328

Neurofuzzy Decision Support System for Efficient Risk Allocation in Public-Private Partnership Infrastructure Projects, 310

Jin, Yongliang
Modeling Blockage Failures in Sewer Systems to Support Maintenance Decision Making, 1559

Jincan, Zheng
see Qingsong, Wei, 1228

Jinglong, Pan
see Songlai, Chen, 1687

Jirka, Gerhard H.
see Detert, Martin, 1021

João, Castro-Gomes
see Fernando, Pacheco-Torgal, 1444

Johansen, Jeremy
see Ma, Tian-Wei, 524

Johansson, Erica
see Hanæus, Jörgen, Ph.D., 174

John Ma, Zhongguo
see Li, Lungui, 162

Johnson, Benjamin W.
Application of a Mass Balance-Based Stochastic Transport Model, 2113

Johnson, Bonnie J., Ph.D., AICP
Promoting Sustainability through Transportation Infrastructure? Innovation and Inertia in the Kansas City Metropolitan Area, 1950

Johnson, Michael C., P.E.
see Sharp, Zachary B., 946

Johnson, Philip W.
see Cui, Qingbin, 1172

Johnsson, H., Ph.D.
see Lukaszewska, E., Ph.D., 1610

Johnsson, Helena, Ph.D.
see André, Alann, 1436

Johnsson, Jörgen, ed.
see Tang, Alex K., P.E., ed., 2269

Jones, Craig
Discussion of "Comparison of Two Techniques to Measure Sediment Erodibility in the Fox River, Wisconsin", 4

Jones, David, Ph.D.
see Fu, Pengcheng, 1343
see Fu, Pengcheng, 1453

Jones, Jenny
Closing the Gender Gap, 2199

Jones, Jon, P.E.
see Guo, James C. Y., Ph.D., P.E, 1215

Jones, Jonathan E., P.E., D.WRE
see Guo, James C. Y., Ph.D., P.E., 1285

Jones, Matthew P.
Effect of Storm-Water Wetlands and Wet Ponds on Runoff Temperature in Trout Sensitive Waters, 1273

Jones, Scott
see Mason, James A., 1561

Jongpradist, Pornkasem
Influence of Fly Ash on Unconfined Compressive Strength of Cement-Admixed Clay at High Water Content, 1345

Jonkergouw, Philip
see Dorini, Gianluca, 2022

Jonoski, Andreja
see Alfonso, Leonardo, Ph.D., 1963

Joseph, Shannon A.
Methodology for Bayesian Belief Network Development to Facilitate Compliance with Water Quality Regulations, 1168

Joshi, Geeta S., M.E., Ph.D.
Infrastructure Development Strategies for Inclusive Growth: India's Eleventh Plan, 2068

Joshi, Kaushal
Laboratory and In Situ Tests for Long-Term Hydraulic Conductivity of a Cement-Bentonite Cutoff Wall, 829

Joshi, Umid Man
see Vijayaraghavan, K., 734

Josse, Juan
Giving It Juice, 2212

Jothiprakash, V.
see Garg, Vaibhav, 1155

Jotisankasa, Apiniti
Suction-Monitored Direct Shear Testing of Residual Soils from Landslide-Prone Areas, 826

Jou, Chih-Ju G., Ph.D.
see Lee, Chien-Li, Ph.D., 658
see Lee, Hsien-Yi, 2097

Jovanović, B. M.
New Approach: Waste Materials as Sorbents for Arsenic Removal from Water, 753

Ju, Young-Kyu
see Kim, Young-Ju, 1717

Juang, C. Hsein
see Koduru, Hari Krishan, 1805

Jugnia, L.-B.
see Cabral, A. R., 702

Julien, P. Y.
Case Study: Flood Mitigation of the Muda River, Malaysia, 969

Julien, Pierre Y.
Celerity and Amplification of Supercritical Surface Waves, 1009
Mean Velocity of Mudflows and Debris Flows, 1012

Jumlongrach, Narongrit
see Jongpradist, Pornkasem, 1345

Jung, B. S.
see Filion, Y. R., 2026

Jung, Chang Mu
see Kim, Ha-Young, 1947

Jung, HeeJin
see Lee, Kwang-Sub, Ph.D., 1875

Jung, Hyung-Jo
Feasibility Test of Adaptive Passive Control System Using MR Fluid Damper with Electromagnetic Induction Part, 484

Jung, In-Yong
see Kim, Young-Ju, 1717

Jung, Jae-Sang
see Lee, Changhoon, 2030

Jung, Jai K.
see Mason, James A., 1578

Jung, Wooyong
Empirical Assessment of Internationalization Strategies for Small and Medium Construction Companies, 444

Jurado-Piña, R.
Methodology to Analyze Sun Glare Impact on Highway under Prolonged Exposure, 1910
Methodology to Analyze Sun Glare Related Safety Problems at Highway Tunnel Exits, 1846

Jusuf, Steve Kardinal
see Hien, Wong Nyuk, 1946

Kacimov, A. R.
Green-Ampt One-Dimensional Infiltration from a Ponded Surface into a Heterogeneous Soil, 1207

Kaewunruen, Sakdirat
Dynamic Crack Propagations in Prestressed Concrete Sleepers in Railway Track Systems Subjected to Severe Impact Loads, 1682

Kaito, Kiyoyuki
see Kobayashi, Kiyoshi, 1192

Kajder, Karen C.
see Chin, David A., 2000

Kakuturu, Sai
see Chopra, Manoj, 1098

Kale, Serdar
Innovation Diffusion Modeling in the Construction Industry, 347

Kallaby, Joseph, P.E., S.E., ed.
see Templeton. J. S., Dr. of Eng., P.E., ed., 2265

Kaloush, K. E.
see Carlson, J. D., 1360

Kalpakidis, Ioannis V.
Effects of Large Cumulative Travel on the Behavior of Lead-Rubber Seismic Isolation Bearings, 1657

Kalumba, D.
see Glendinning, S., 659

Kalyanaraman, V.
see Kumar, M. V. Anil, 1694

Kamon, Masashi
see Plata, Hermelinda, 699

Kampa, Kittipat
see Kennedy, Andrew B., 2033

Kandasamy, S.
Free Vibration Analysis of Cylindrical Shells Supported on Parts of the Edges, 42

Kandemir, Ali
see Türkel, Selçuk, 1458

Kandiah, Pratheepan
see Hajj, Elie Y., 1809

Kandil, Amr
Optimization Research: Enhancing the Robustness of Large-Scale Multiobjective Optimization in Construction, 316
see Al Qady, Mohammed, 344

Kandil, Amr A.
see El-adaway, Islam H., 345
see El-Adaway, Islam H., 1317

Kane, Malal
On the Study of Polishing of Road Surface under Traffic Load, 1793

Kaneda, Tsubasa
see Mizumura, Kazumasa, 1129

Kanellaidis, G.
see Yannis, G., 1838

Kanellopoulos, Antonios
see Farhat, Farhat A., 1342

Kanematsu, Masakazu
see Chen, Wei-Hsiang, 730

Kaner, I.
see Eastman, C. M., 264

Kanet, John J.
see Gorman, Michael F., 1863

Kang, Doosun
Filtering Bad Measurement Data for Water Distribution System Demand Estimation, 2010
Optimal Meter Placement for Water Distribution System State Estimation, 1993
Real-Time Optimal Valve Operation and Booster Disinfection for Water Quality in Water Distribution Systems, 2005

Kang, Jin
see Yuan, Songhu, Ph.D., 719

Kang, Jong-Beom, Ph.D.
Consolidation of a Geosynthetic Clay Liner under Isotropic States of Stress, 798

Membrane Behavior of Compacted Clay Liners, 907

Kang, Min Goo
Evaluating Watershed Management within a River Basin Context Using an Integrated Indicator System, 1985

Kang, Thomas H.-K., Ph.D., P.E.
see Probst, Aaron D., 1744

Kang, Yaohu
see Jiang, Shufang, 1230
see Jiang, Shufang, 1248

Kanvinde, A. M.
see Myers, A. T., 598

Kao, C. M.
Assessing of Natural Attenuation and Intrinsic Bioremediation Rates at a Petroleum-Hydrocarbon Spill Site: Laboratory and Field Studies, 615
see Chien, H. Y., 681
see Khanal, Samir K., ed., 2228
see Lin, C. E., 2111
see Tsai, T. T., 642

Kao, Chung-Chin
see Green, Stuart D., 326

Kao, Jehng-Jung
Service Distance and Ratio-Based Location-Allocation Models for Siting Recycling Depots, 662

Kapelan, Zoran
see Dorini, Gianluca, 2022
see Weickgenannt, Martin, 2023

Kapila, Vikram, Ph.D.
see Iskander, Magued, Ph.D., P.E., 1592

Kappos, Andreas J.
see Dimitrakopoulos, Elias, 489

Karahasanoglu, Serdar
see Zekioglu, Atila, P.E., 2191

Karakoç, Mehmet Burhan, Ph.D.
HSC with Expanded Perlite Aggregate at Wet and Dry Curing Conditions, 1486

Karamouz, Mohammad
Interbasin Water Transfer: Economic Water Quality-Based Model, 1209
Optimization of Watershed Control Strategies for Reservoir Eutrophication Management, 1291
see Mostafavi, Ali, 407
see Nicklow, John, 2001

Karapantsios, Thodoris D.
see Bondelind, Mia, 771

Karapataki, Christina
see Adamowski, Jan, 1130

Karapiperis, Dennis
Combined Effort, 2201

Kararam, Anupong
see Abolmaali, Ali, 1873

Karavasilis, Theodore L.
Dimensional Response Analysis of Multistory Regular Steel MRF Subjected to Pulselike Earthquake Ground Motions, 1698

Kareem, Ahsan
see Carassale, Luigi, 537

Kargas, G.
Evaluation of a Dielectric Sensor for Measurement of Soil-Water Electrical Conductivity, 1261

Karihaloo, Bhushan L.
see Farhat, Farhat A., 1342

Karimpour, Hamid
Time Effects Relate to Crushing in Sand, 893

Karjala, Sarah
see Al-Kaisy, Ahmed, 1888

Karlaftis, Matthew G.
see Anastasopoulos, Panagiotis Ch., 1196
see Kepaptsoglou, Konstantinos, 1852

Karney, Bryan W.
see Racoviceanu, Alina I., 1166

Karonis, Nicholas T.
see Mirghani, Baha Y., 306

Kasalanati, Amarnath, P.E.
see Cui, Shenlei, 1700

Kasprzak, J.
see Magnucki, K., 1695

Kassab, Moustafa, Ph.D.
Computerized DSS for Construction Conflict Resolution under Uncertainty, 438

Kassem, Wael
Estimation of Shear Strength of Structural Shear Walls, 1727

Kassimali, Aslam
Geometrically Nonlinear Analysis of Plane Frames Subjected to Temperature Changes, 1739

Kastanek, Frantisek, D.Sc.
see Kastanek, Petr, Ph.D., 643

Kastanek, Petr, Ph.D.
Microwave-Enhanced Thermal Desorption of Polyhalogenated Biphenyls from Contaminated Soil, 643

Kasturia, Saurabh
Multiobjective Transit Passenger Information System Design Using GIS, 1920

Kathula, Vani, Ph.D., P.E.
see Rowe, Reggie L., P.E., 1573

Kato, Ema
see Dai, Jian-Guo, 258

Katona, Michael G., Ph.D.
Seismic Design and Analysis of Buried Culverts and Structures, 1575

Katopodis, C.
see Rajaratnam, N., 1042

Katsumi, Takeshi
see Plata, Hermelinda, 699

Kaul, Vivek
see Tsai, Yi-Chang, 1789

Kausel, Eduardo
Complex Frequencies in Elastodynamics, with Application to the Damping-Solvent Extraction Method, 522

Kavazanjian, Edward
see Bray, Jonathan D., 10
see Zekkos, Dimitrios, 895

Kawada, Tadaki
History of the Modern Suspension Bridge: Solving the Dilemma Between Economy and Stiffness, 2255

Kawaguchi, A.
see Agrawal, A. K., 134

Kawanishi, Naoki
see Goto, Yoshiaki, 1745

Kaya, Abidin, Ph.D.
see Rima, Jamil, Ph.D., 680

Kaya, Durmus
Energy Conservation Opportunities in an Industrial Boiler System, 449

Kaya, Nihat
see Emiroglu, M. Emin, 1203

Kaya, Osman
see Parvin, Azadeh, 183

Kaye, N. B.
see Prohaska, P. D., 1238

Ke, Han
see Chen, Yunmin, 843

Ke, Yongjian
Risk Allocation in Public-Private Partnership Infrastructure Projects: Comparative Study, 1198
see Chan, Albert P. C., 363
see Chan, Albert P. C., 1320

Kechavarzi, Cedric
see Joshi, Kaushal, 829

Keilis-Borok, V.
see Davis, C., P.E., 2095

Kelesoglu, M. Kubilay
Free-Field Measurements to Disclose Lateral Reaction Mechanism of Piles Subjected to Soil Movements, 806

Keller, Arturo A.
see Wang, Hongtao, 729

Keller, Jürg
see Zhang, Lishan, 742

Keller, Thomas
Thermomechanical Behavior of Multifunctional GFRP Sandwich Structures with Encapsulated Photovoltaic Cells, 224

Kelly, Patrick M.
see Chin, David A., 2000

Kendall, Alissa
see Zhang, Han, Ph.D., 1195

Kenna, Padraic
International Instruments on Housing Rights, 1294

Kennedy, Andrew B.
Hurricane Response of Nearshore Borrow Pits from Airborne Bathymetric Lidar, 2033
see Zhang, Yang, 2047

Kennedy, Courtney Call, P.E.
see Rowe, Reggie L., P.E., 1573

Kennedy, Gaylene D.
see Lam, Angus C. C., 254

Kenner, Matthew
see Pape, Ronald, 2145

Kenney, Melissa A.
see Alameddine, Ibrahim, 755

Kensek, Karen
see Becerik-Gerber, Burcin, 1595

Kent, David C.
Understanding Construction Industry Experience and Attitudes toward Integrated Project Delivery, 396

Keoleian, Gregory A.
see Zhang, Han, Ph.D., 1194
see Zhang, Han, Ph.D., 1195

Kepaptsoglou, Konstantinos
Bus-to-Depot Allocation: Models and Decision Support System, 1852

Kerkides, P.
see Kargas, G., 1261

Kerringan, Joseph B., P.E., ed.
see Goss, Christoph M, Ph.D., P.E., ed., 2249

Kesserwani, G.
New Approach for Predicting Flow Bifurcation at Right-Angled Open-Channel Junction, 1010

Kestner, Dirk M., P.E.
Sustainability Guidelines for the Structural Engineer, 2285

Kevern, J. T.
Effect of Coarse Aggregate on the Freeze-Thaw Durability of Pervious Concrete, 1393

Khademi, Navid
Multicriteria Group Decision-Making Technique for a Low-Class Road Maintenance Program, 1183

Khaitan, Sameer
Field Evaluation of Bauxite Residue Neutralization by Carbon Dioxide, Vegetation, and Organic Amendments, 726

Khalili-Tehrani, Payman
see Lemnitzer, Anne, 936
see Shamsabadi, Anoosh, 123

Khan, A. A.
see Prohaska, P. D., 1238

Khan, Ashfaq, Ph.D.
Investigation of the Use of Lightweight Aggregate Hot-Mixed Asphalt in Flexible Pavements in Frost Susceptible Areas, 1358

Khan, Zafar
Structural Condition Assessment of Sewer Pipelines, 1512

Khanal, Samir K., ed.
Bioenergy and Biofuel from Biowastes and Biomass, 2228

Khanzadi, Mostafa
see Ghandehari, Masoud, 1346

Khare, Mukesh
see Goyal, Radha, 2123

Khasnabis, S.
Mechanisms for Transportation Infrastructure Investment in Developing Countries, 1927

Khasnabis, Snehamay
see Mishra, Sabyasachee, 1819

Khattak, Asad
see Zhang, Hongbing, 1895

Khazai, Bijan
see Franco, Guillermo, 2078

Khazanovich, Lev
Parameter Identification Procedure for Heterogeneous Viscoelastic Composites Using Iterative Functions, 541

Khe, Alexander
see Creaco, Enrico, 511

Kheni, Nongiba A.
Health and Safety Management within Small- and Medium-Sized Enterprises (SMEs) in Developing Countries: Study of Contextual Influences, 424

Khomwan, Nantawat
FE Modeling of FRP-Repaired Planar Concrete Elements Subjected to Monotonic and Cyclic Loading, 247

Khondakar, Bidoura
Transferability of Community-Based Collision Prediction Models for Use in Road Safety Planning Applications, 1882

Khoury, Naji N., Ph.D.
Performance of a Stabilized Aggregate Base Subject to Different Durability Procedures, 1397

Khu, Soon-Thiam
see Fu, Guangtao, 648

Khullar, Narinder K.
Suspended Wash Load Transport of Nonuniform Sediments, 999

Kianoush, M. R.
see Ghaemmaghami, A. R., 1652

Kim, Ahim
Performance of MBE/DBE/WBE Construction Firms in Transportation Projects, 390

Kim, Bong-Geun
Automatic Extraction of Apparent Semantic Structure from Text Contents of a Structural Calculation Document, 290

Kim, Byung-Cheol
Probabilistic Forecasting of Project Duration Using Kalman Filter and the Earned Value Method, 398

Kim, Changyoon
see Wu, Yuhong, 267

Kim, Dongjin
Large Eddy Simulation of Flow and Tracer Transport in Multichamber Ozone Contactors, 611

Kim, Dongsu
see Muste, Marian, 971

Kim, Doo-Il
see Kim, Dongjin, 611

Kim, Du Y.
see Jung, Wooyong, 444

Kim, Ha-Young
Does a Technology Incubator Work in the Regional Economy? Evidence from South Korea, 1947

Kim, Hyo-Jin
see Kim, Bong-Geun, 290

Kim, Hyoungkwan
see Wu, Yuhong, 267

Kim, Hyung-Jun
Numerical Simulation of Shallow-Water Flow Using a Modified Cartesian Cut-Cell Approach, 498

Kim, Hyunwook
Mesh-Independent Fracture Modeling for Overlay Pavement System under Heavy Aircraft Gear Loadings, 1828

Kim, Jae Young
see Moon, Hee Sun, 666

Kim, Jae-Hong
see Kim, Dongjin, 611

Kim, Jaeseung, Ph.D.
Application of the Viscoelastic Continuum Damage Model to the Indirect Tension Test at a Single Temperature, 509

Determination of Shear and Bulk Moduli of Viscoelastic Solids from the Indirect Tension Creep Test, 565

Kim, Jae-yun
see Kim, Sung Hoon, 951

Kim, Jihyoung, P.E.
see Rollins, Kyle M., Ph.D., 890

Kim, Jin-Lee
Comparing Schedule Generation Schemes in Resource-Constrained Project Scheduling Using Elitist Genetic Algorithm, 330

Kim, Jo-Chun
Electron Beam Irradiation for Mercury Oxidation and Mercury Emissions Control, 675

Kim, Joonhyo, Ph.D.
Estimation of Capacity of Two-Lane Two-Way Highways Using Simulation Model, 1795

Kim, Jungyong "Joe"
Long-Term Field Performance of Cold In-Place Recycled Roads in Iowa, 1522
see Chen, Don, 1523

Kim, Jun-Yeop
see Lee, Chadon, P.E., 226

Kim, Kangwook, Ph.D.
see Rasdorf, William, Ph.D., P.E., 1186

Kim, Ki-Hyun
see Kim, Jo-Chun, 675

Kim, Kitae
Simulation-Based Analysis of Train Controls under Various Track Alignments, 1890

Kim, K.-M.
Full-Scale Impact Test of Four Traffic Barriers on Top of an Instrumented MSE Wall, 815

Kim, Kyong Ju, Ph.D.
Case Study on the Evaluation of Equipment Flow at a Construction Site, 314
Preliminary Cost Estimation Model Using Case-Based Reasoning and Genetic Algorithms, 307

Kim, Kyoungmin, Ph.D.
see Kim, Kyong Ju, Ph.D., 307
see Kim, Kyong Ju, Ph.D., 314

Kim, Minki
see Lee, Junhwan, 779

Kim, Moo-Hyun
see Koo, Weoncheol, 2054

Kim, Myoung-Mo, Ph.D.
see Seo, Min-Woo, Ph.D., 838

Kim, Namho, Ph.D.
see Kim, Jaeseung, Ph.D., 565

Kim, P. Y.
see Ginger, J. D., 1737

Kim, S. J.
see Stoesser, T., 1048

Kim, Sang-Dae
see Kim, Young-Ju, 1717

Kim, Sang-Woo
see Lee, Jung-Yoon, 1741

Kim, Seo Jin
Pullout Strength Models for FRP Anchors in Uncracked Concrete, 217
see Smith, Scott T., 234

Kim, Seok
Effects of Pavement Spatial Variability on Contractor's Management Strategies, 1187

Kim, Seonwoong
see Lee, Cheol-Ho, 1623

Kim, Sung Hoon
Effects of Bubble Size and Diffusing Area on Destratification Efficiency in Bubble Plumes of Two-Layer Stratification, 951

Kim, Sunghwan
see Chen, Don, 1523
see Gopalakrishnan, Kasthurirangan, 302

Kim, Uksun, Ph.D.
see Probst, Aaron D., 1744

Kim, Wongee
see Bhandari, Alok, 738

Kim, Y. Richard
see Lee, Jaejun, 1520
see Yun, Taeyoung, 1387

Kim, Yail J.
Flexural Response of Concrete Beams Prestressed with AFRP Tendons: Numerical Investigation, 241
Identifying Critical Sources of Bridge Deterioration in Cold Regions through the Constructed Bridges in North Dakota, 146
Load Configuration and Lateral Distribution of NATO Wheeled Military Trucks for Steel I-Girder Bridges, 165
see Yoshitake, Isamu, 253

Kim, Yeesock
Control of a Seismically Excited Benchmark Building Using Linear Matrix Inequality-Based Semiactive Nonlinear Fuzzy Control, 1708

Kim, Yong-Rak, Ph.D.; P.E., ed.
see Tarefder, Rafiqul A., Ph.D.; P.E., ed., 2266

Kim, Yong-Woo
Assessing the Environmental Impacts of a Lean Supply System: Case Study of High-Rise Condominium Construction in Korea, 92
Management Thinking in the Earned Value Method System and the Last Planner System, 1337

Kim, Yoon Young
see Jang, Gang-Won, 1762

Kim, Young Hoon, Ph.D.
Shear Characteristics and Design for High-Strength Self-Consolidating Concrete, 1705

Kim, Young-Ju
Cyclic Behavior of Diagrid Nodes with H-Section Braces, 1717

Kim, Young-Oh
see Eum, Hyung-Il, 1133

Kim, Yun Ki, Ph.D.
Field Infiltration Characteristics of Natural Rainfall in Compacted Roadside Slopes, 797

Kim, Yun Tae, Ph.D.
Experimental Evaluation of Strength Characteristics of Stabilized Dredged Soil, 1401

Kimble, Robert E., P.E.
Stability of Built-Up Timber Beams and Columns: Accounting for Modulus of Elasticity Variability, 2156

Kind, Thomas
see Válek, Jan, Ph.D., 1543

King, Aaron M.
see Minchin, R. Edward, 343

King, Anthony W.
see Pan, Feifei, 1149

King, B. A.
see Benfer, N. P., 2037

King, J. Phillip, P.E.
see Abudu, Shalamu, 1116
see Abudu, Shalamu, 1235
see Fernald, Alexander G., 1289

King, W. S.
Practical Summer Training in Civil and Construction Engineering for Cultivation of Professional Ability, 1605

Kinnell, Jason C.
see Deason, Jonathan P., 2029

Kiousis, Panos D.
Truss Modeling of Concrete Columns in Compression, 558

Kiremidjian, Anne S.
see Fan, Yueyue, 1182

Kirk, Adam, P.E., AICP
see Stamatiadis, Nikiforos, P.E., 1820

Kirshen, Paul H.
see Ray, Patrick A., 1962
see Zoltay, Viktoria I., 2016

Kisi, Ozgur
Evapotranspiration Modeling Using Linear Genetic Programming Technique, 1278
Fuzzy Genetic Approach for Modeling Reference Evapotranspiration, 1219

Kitanidis, Peter K.
see MacWilliams, Michael L., 1051

Kite, Steve, CEng
Worth the Wait, 2213

Kitipornchai, S.
see Xiang, Y., 563

Kiziltas, Semiha, Ph.D.
Automated Generation of Customized Field Data Collection Templates to Support Information Needs of Cost Estimators, 274

Klammler, Harald
Influence of Spatially Variable Side Friction on Single Drilled Shaft Resistance and LRFD Resistance Factors, 884

Klancnik, Fred, P.E.
Lakefront Renaissance, 2200

Klap, Kees
see Ren, Shibo, 120

Klar, A., Ph.D.
see Leung, Y. F., 805
see Leung, Y. F., 937
see Marshall, A. M., 935

Klein, Bastian, Ph.D.
Probability Analysis of Hydrological Loads for the Design of Flood Control Systems Using Copulas, 1092

Kleiner, Yehuda
see Nafi, Amir, 2011

Klenzendorf, J. Brandon
Impact of Bridge Rail Geometry on Floodplain Analysis, 1156

Klotz, D. Wayne, P.E.
see Leonard, Blaine, P.E., 2185

Klotz, Leidy
Counterfactual Analysis of Sustainable Project Delivery Processes, 373

Knappett, J. A.
Lateral Spreading Forces on Bridge Piers and Pile Caps in Laterally Spreading Soil: Effect of Angle of Incidence, 928

Kneppers, Jax
see Nguyen, Long D., 439

Knobloch, Markus, Ph.D.
see Frangi, Andrea, Ph.D., 1629

Ko, Ick Hwan
see Kang, Min Goo, 1985

Ko, J. M.
see Ni, Y. Q., 1759

Ko, Steven Kee Ping
see Molleti, Suda, Ph.D., 2131

Kobayashi, Kiyoshi
Deterioration Forecasting Model with Multistage Weibull Hazard Functions, 1192

Kobayashi, Nobuhisa
Wave Overtopping and Damage Progression of Stone Armor Layer, 2052

Koc, W.
Determination of the Transverse Resistance Characteristics in Railway Track, 1902

Koch, James E., Ph.D., P.E.
Project Administration for Design-Build Contract: A Primer for Owners, Engineers, and Contractors, 2272

Kockelman, Kara, P.E.
see Duthie, Jennifer, 1949

Kodikara, Jayantha
Theoretical p-y Curves for Laterally Loaded Single Piles in Undrained Clay Using Bezier Curves, 800
see Wilkinson, Alex, 915

Kodur, V. K. R.
Numerical Model for Tracing the Response of FRP-Strengthened RC Beams Exposed to Fire, 248

Kodur, Venkatesh
High-Temperature Properties of Steel for Fire Resistance Modeling of Structures, 1388

Koduru, Hari Krishan
Using Fuzzy Logic and Expert System Approaches in Evaluating Flexible Pavement Distress: Case Study, 1805

Koduru, S. D.
Probabilistic Seismic Loss Assessment of a Vancouver High-Rise Building, 1630

Kodzhespirova, Inna F.
see Kovalenko, Yuriy, 977

Koerner, Robert M.
see Qian, Xuede, 844

Kog, Yue Choong
Buried Pipeline Response to Braced Excavation Movements, 1518
Legal Issues of Integrated Network for Construction and Real Estate Sector, 1313

Koh, Tas Yong
Empiricist Framework for TQM Implementation in Construction Companies, 1330

Koike, Takeshi
see Garciano, Lessandro Estelito O., 1654

Koike, Toshio
see Valeriano, Oliver Cristian Saavedra, 1114

Koizumi, Jun-ichi
see Sahabi, Danladi M., 668

Kolakovic, Srdjan
see Trajkovic, Slavisa, 1214

Kolcu, Kayhan
see Demir, Cem, 190

Kolehmainen, Reija E., Ph.D.
Biodegradation of Aqueous Organic Matter over Seasonal Changes: Bioreactor Experiments with Indigenous Lake Water Bacteria, 682

Kolios, Dimitrios
see Lignos, Dimitrios G., 1720

Kollakowsky, Dave
see Dombrowski, Frank J., CHMM, 716

Kolymbas, Dimitrios
see Herle, Ivo, 1541

Kondolf, G. Mathias
see MacWilliams, Michael L., 1051

Kong, C. W.
see Li, Yan, Ph.D., 1944

König, Christian
see Huawen, Ye, 237

Kono, Tetsutya
see Imai, Michio, 1706

Koo, KyoJin
see Cho, KyuMan, 1319

Koo, Weoncheol
Nonlinear Time-Domain Simulation of a Land-Based Oscillating Water Column, 2054

Köpp, Christian
see Válek, Jan, Ph.D., 1543

Kopp, Gregory A.
Horizontal Wind Loads on Open-Frame, Low-Rise Buildings, 1615

"Three Little Pigs" Project: Hurricane Risk Mitigation by Integrated Wind Tunnel and Full-Scale Laboratory Tests, 2093
see Morrison, Murray J., 1641

Korkmaz, Sinem
High-Performance Green Building Design Process Modeling and Integrated Use of Visualization Tools, 80

Piloting Evaluation Metrics for Sustainable High-Performance Building Project Delivery, 402

Korom, Scott F.
Graphical Solutions for Hillslopes: Discharge, Head, and Velocity Diagrams, 1263

Kortelainen, Nina M., Ph.D.
see Kolehmainen, Reija E., Ph.D., 682

Koskela, Lauri
see Sacks, Rafael, 411

Kostaschuk, Ray
see Simmons, Stephen M., 945

Kostoglou, Margaritis
see Bondelind, Mia, 771

Kota, V.
see Ku, H., Ph.D., 1351

Kothyari, Umesh C.
see Khullar, Narinder K., 999

Kottke, Albert R.
see Rathje, Ellen M., Ph.D., 833

Kousky, Carolyn
Improving Flood Insurance and Flood-Risk Management: Insights from St. Louis, Missouri, 2094

Kovalenko, Yuriy
Experimental Analysis of Hydraulic Solver Convergence with Genetic Algorithms, 977

Kozarek, J. L.
Hydraulic Complexity Metrics for Evaluating In-Stream Brook Trout Habitat, 1053

Kozgushko, B. V.
see Saltykov, L. S., 2117

Koziel, Jacek A., Ph.D.
see Li, Ling, Ph.D., 645

Kramer, Randall A.
see Elsin, Yoanna Kraus, 2006

Kramer, Steven L.
see Mayfield, Roy T., 787

Krawinkler, Helmut
see Zareian, Farzin, 1699

Kreč, Klaus
see Tschegg, Elmar Karl, 1496

Kreiter, Stefan, Ph.D.
see Schlue, Benjamin Friedrich, Ph.D., 913

Krenk, S.
see Weber, F., 1618

Kriftcher, Noel, Ed.D.
see Iskander, Magued, Ph.D., P.E., 1592

Krinker, Mark
see Bolonkin, Alexander, 70

Kripakaran, Prakash
see Goulet, James-A., 1736
see Saitta, Sandro, 262

Krishnakumar, C.
Hydrodynamic Performance of Single- and Double-Wave Screens, 2034

Krishnan, Swaminathan
Modified Elastofiber Element for Steel Slender Column and Brace Modeling, 1740

Kröger, Detlev G.
see Westdyk, Dimitra, 1236

Krogmann, Uta
see Tsai, Ching-Ling, 708

Krogmeier, James V., Ph.D.
see Brennan, Thomas M., Ph.D., P.E., 1907

Kruschwitz, Sabine, Ph.D.
see Válek, Jan, Ph.D., 1543

Ku, H., Ph.D.
Optimum Percentage of Fly Ash Reinforcement in Vinyl Ester Composites, 1351

Ku, Hsin-Chuan
see Lin, Liang-Tay, 1856

Kuchma, Daniel
see Park, Jung-Woong, 1627

Kucukmehmetoglu, Mehmet
Multiobjective Allocation of Transboundary Water Resources: Case of the Euphrates and Tigris, 1968

Kuester, Falko
see Olsen, Michael J., 285

Kuhlmann, Heiner
see Li, Lihua, 1785

Kuhn, Kenneth D.
Network-Level Infrastructure Management Using Approximate Dynamic Programming, 1173

Kuhns, R. D.
see Strom, K. B., 991

Kuiry, Soumendra Nath
Coupled 1D–Quasi-2D Flood Inundation Model with Unstructured Grids, 994

Kulkarni, Hanumanth S.
see Sivakumar Babu, G. L., 2110

Kulkarni, Kundan
see Jáuregui, David V., P.E., 111

Kulkarni, Sudhakar A.
see Li, Bing, 1608

Kulkarni, Vinayak
Accelerometer-Based Force Balance for High Enthalpy Facilities, 68

Kumar, Brind
see Ransinchung R. N., G. D., 1374

Kumar, Dhirendra
Prediction of Life-Cycle Expenditure for Different Categories of Council Buildings, 1551

Kumar, Ghosh Prosenjit
see Goto, Yoshiaki, 1745

Kumar, Harjinder
Evaluation of Electric Arc Furnace Slag as a Potential Phosphate-Removal Substrate, 649

Kumar, M. V. Anil
Evaluation of Direct Strength Method for CFS Compression Members without Stiffeners, 1694

Kumar, Praveen
Comparative Study of Rheological Behavior of Modified Binders for High-Temperature Areas, 1452
see Singh, Varun, Ph.D., 1878

Kumbasar, N., Ph.D.
see Ispir, M., 1420

Kunin, Jonathan
see Subramaniam, Kolluru V., 105

Kunreuther, Howard
see Kousky, Carolyn, 2094

Kuo, Jan-Tai
see Yang, Chou-Ping, 2107

Kupka, Michael
see Herle, Ivo, 1541

Kurama, Yahya, Ph.D.
see El-Tawil, Sherif, Ph.D., P.E., 1683
see El-Tawil, Sherif, 2273

Kurama, Yahya C.
see Weldon, Brad D., 1713

Kurc, Ozgur
Workload Distribution Framework for the Parallel Solution of Large Structural Models on Heterogeneous PC Clusters, 276

Kürschner, Kai
see Schober, Hans, 2194

Kuta, R. W.
Sensitivity of Field Data Estimates in One-Dimensional Hydraulic Modeling of Channels, 983

Kuzin, S. A.
Probabilistic Approach to Estimation of Urban Storm-Water TMDLs: Regulated Catchment, 1270

Kvasnak, Andrea
see Li, Xinjun, 1355

Kwak, Hyo-Gyoung
Experimental and Numerical Quantification of Plastic Settlement in Fresh Cementitious Systems, 1450

Kwak, Young Hoon
see Ryoo, Boong Yeol, 281

Kwan, Pierre
see Brant, Jonathan A., 674

Kwon, Ku Hyun
see Rollins, Kyle M., 795

Kyung, Doohyun
see Lee, Junhwan, 779

La Loggia, Goffredo
see Liuzzo, Lorena, Ph.D., 1068

Labadie, John W.
see Triana, Enrique, 1977
see Triana, Enrique, 1978

Labi, S.
see Lamptey, G., 1834

Labi, Samuel
see Anastasopoulos, Panagiotis Ch., 403
see Anastasopoulos, Panagiotis Ch., 1196
see Bhargava, Abhishek, 434

Labossière, P.
see Ferrier, E., 197
see Godat, A., 202

Labossière, Pierre
Lessons Learned from a Design Competition for Structural Engineering Students: The Case of a Pedestrian Walkway at the Université de Sherbrooke, 1587

LaBoube, Roger A.
see Baur, Stuart W., 83

Labuz, J. F.
see Wachman, G. S., 777

Lachemi, M., Ph.D., P.E.
see Hossain, K. M. A., Ph.D., P.E., 1414

Lade, Poul V.
Effects of Particle Crushing in Stress Drop-Relaxation Experiments on Crushed Coral Sand, 822
see Karimpour, Hamid, 893

Laefer, Debra F.
Reliability of Crack Detection Methods for Baseline Condition Assessments, 1176

LaFave, James M.
see Reneckis, Dziugas, 1685

Lagier, Thomas
see Babilotte, Antoine, 701

Lagos, L.
Effectiveness of Moisture and Fixatives in Controlling Mobility of Contaminated Soil Particles by Wind Forces, 2119

Lahr, P., P.E.
see Davis, C., P.E., 2095

Lai, Anthony W. Y.
Measuring Performance for Building Maintenance Providers, 401

Lai, F. S.
see Arabkhedri, Mahmood, 1071

Lai, Peter
see Klammler, Harald, 884

Lai, Y. C.
see Lin, C. E., 2111

Lai, Yong G.
Two-Dimensional Depth-Averaged Flow Modeling with an Unstructured Hybrid Mesh, 942

Lai, Yuanming
see Zhang, Mingyi, 176

Lakhera, Sanyogita
see Peña-Mora, Feniosky, 289

Lall, Upmanu
see Apipattanavis, Somkiat, 1123

Lalman, Jerald A.
see Ray, Srimanta, 677

Lam, Angus C. C.
Study of Stress Intensity Factor of a Cracked Steel Plate with a Single-Side CFRP Composite Patching, 254

Lam, Frank, P.E.
see Song, Xiaobin, Ph.D., 1628
see Song, Xiaobin, Ph.D., 1679
see Tannert, Thomas, Ph.D., 494

Lam, Ka-Chi
Efficacy of Using Support Vector Machine in a Contractor Prequalification Decision Model, 286

Lam, Mike Chun-Kit
see Lam, Ka-Chi, 286

Lam, Patrick T. I.
Effectiveness of ICT for Construction Information Exchange among Multidisciplinary Project Teams, 295
see Chan, Albert P. C., 363
see Chan, Albert P. C., 1320
see Chan, Daniel W. M., 364
see Chiang, Y. H., 395

Lam, William H. K.
see Wong, S. C., 1815

Lamaddalena, N.
see Daccache, A., 1229

Lamarche, Charles-Philippe
see Bursi, Oreste S., 596

Lambert, M. F.
see Lewis, D. M., 1007
see Wong, G., 1070

Lambert, Martin F.
see Zecchin, Aaron C., 1018

Lambrou, E.
Evaluation of the Credibility of Reflectorless Distance Measurement, 1786

Lamptey, G.
Systematic Framework for Incorporating Safety in Network-Level Transportation Planning and Programming, 1834

Lamsal, Buddhi P.
see Khanal, Samir K., ed., 2228

Lan, C. Edward
see Chang, Ray C., 61

Lanc, Domagoj
see Brnic, Josip, 567

Landers, Jay
Entering the Mainstream, 2203
Revisiting the Gathering Storm, 2222

Lane, Stuart N.
see Simmons, Stephen M., 945

Lang, Gregory A.
see Anderson, Eric J., 995

Langari, Reza
see Kim, Yeesock, 1708

Lange, Clifford R.
Biological and Abiotic Color Reduction of Paper Mill Effluents during Anaerobic Composting, 692

Langford, Cooper H.
see Achari, Gopal, 2105
see Chang, Yanjun, 2127

Langlois, Y.
see Paultre, P., 1728

Langston, Craig
see Tan, Yongtao, 420

Langwaldt, Jörg H., Ph.D.
see Kolehmainen, Reija E., Ph.D., 682

Lansey, Kevin
see Kang, Doosun, 1993
see Kang, Doosun, 2005
see Kang, Doosun, 2010

Lantz, Timothy S.
see Peña-Mora, Feniosky, 289

Lanza di Scalea, Francesco
see Srivastava, Ankit, 551

Lanzoni, Stefano
see Gregoretti, Carlo, 1033

Laosamathikul, Thanapol
see Makaratat, Nattapong, 1474

Lari, Kaveh Sookhak
Simplified Numerical and Analytical Approach for Solutes in Turbulent Flow Reacting with Smooth Pipe Walls, 1005

Larsen, Graeme D.
see Green, Stuart D., 326

Larsen, Peter
see Chinowsky, Paul S., 1181

Larson, Magnus
Direct Formula to Compute Wave Height and Angle at Incipient Breaking, 2040
see Lövstedt, Charlotta Borell, Ph.D., 966
see Nam, Pham Thanh, 2044

Lasky, Ty A.
see Arsenault, Aaron, 1185

Latif, Sikdar Muhammad Istiuq
see Chang, Shoou-Yuh, 664

Lau, Anthony
see Ra, ChangSix, 679

Lau, Shing-Tak Douglas
see Stovin, Virginia, 975

Laugesen, Carsten
Sustainable Wastewater Management in Developing Countries: New Paradigms and Case Studies from the Field, 2286

Laungrungrong, Busaba
Hybrid Control Charts for Active Control and Monitoring of Concrete Strength, 1348

Lauzon, Nicolas
Artificial Intelligence Techniques as Detection Tests for the Identification of Shifts in Hydrometric Data, 298

Lavan, Oren
Dynamic Analysis of Gap Closing and Contact in the Mixed Lagrangian Framework: Toward Progressive Collapse Prediction, 555
see Gilani, Amir S. J., SE, 82

Lawler, Desmond F.
see Nason, Jeffrey A., 610

Lawniczak, Fabrice
see Ghostine, Rabih, 992

Lawton, E. C., P.E.
see Newman, M. P., 802

Laxman, Kotkar Kishor
Pedestrian Flow Characteristics in Mixed Traffic Conditions, 1919

Layne, Peggy, P.E.
Perspectives on Leadership from Female Engineering Deans, 2077

Lazio, Peter, PLS
OPUS-RS Pair Points: Case Study, 1777

Le Cloirec, Pierre
see Giraudet, Sylvain, Ph.D., 620

Le, Jia-Liang
see Yu, Qiang, 463

LeBeau, Keary, P.E.
Predictive and Diagnostic Load Rating Model of a Prestressed Concrete Bridge, 132

LeBlanc, R. J.
see Bhunia, Puspendu, 2112

Leconte, Robert, Ph.D., P.E.
see Minville, Marie, Ph.D., 1997

Ledezma, Christian, Ph.D.
Probabilistic Performance-Based Procedure to Evaluate Pile Foundations at Sites with Liquefaction-Induced Lateral Displacement, 819

Lee, Byong-Ju
see Shamir, Eylon, 1158

Lee, Chadon, P.E.
Experimental Observation on the Effectiveness of Fiber Sheet Strip Stirrups in Concrete Beams, 226

Lee, Changho
Characteristics of Rubber-Sand Particle Mixtures according to Size Ratio, 1376
Effect of Secondary Impacts on SPT Rod Energy and Sampler Penetration, 824
see Lee, Jong-Sub, 792

Lee, Changhoon
Asymmetry in Directional Spreading Function of Random Waves due to Refraction, 2030

Lee, Chanyoung, Ph.D.
see Chen, Yali, Ph.D., 1816

Lee, Cheol-Ho
Parallel Axial-Flexural Hinge Model for Nonlinear Dynamic Progressive Collapse Analysis of Welded Steel Moment Frames, 1623

Lee, Chien-Li, Ph.D.
Degradation of Chlorobenzene in Water Using Nanoscale Cu Coupled with Microwave Irradiation, 658

Lee, Dalbyul
see French, Steven P., 2083

Lee, Der-Horng
Origin-Based Partial Linearization Method for the Stochastic User Equilibrium Traffic Assignment Problem, 1794

Lee, Dong-Eun
Integrated Simulation System for Construction Operation and Project Scheduling, 313

Lee, George C.
Characterization of a Roller Seismic Isolation Bearing with Supplemental Energy Dissipation for Highway Bridges, 1658
see Ou, Yu-Chen, 1632

Lee, Geun-Sang
Determining the Sediment Delivery Ratio Using the Sediment-Rating Curve and a Geographic Information System–Embedded Soil Erosion Model on a Basin Scale, 1139

Lee, Gwang Man
see Kang, Min Goo, 1985

Lee, Heon-Jae
see Jung, Hyung-Jo, 484

Lee, Hosin "David"
see Chen, Don, 1523
see Kim, Jungyong "Joe", 1522

Lee, Hsien-Yi
Efficient Microwave Technology to Immobilize Heavy Metal Copper (Cu) Contaminated Soil by Microwave Energy, 2097

Lee, Hsin-Yi
see Cheng, Li-Lin, 2122

Lee, Hyung Suk
see Kim, Jaeseung, Ph.D., 565

Lee, Hyun-Soo
see Ji, Sae-Hyun, 399

Lee, Hyun-soo
see Park, Moonseo, 383

Lee, In-Won
see Jung, Hyung-Jo, 484

Lee, Jae Ha
Use of Mixed-Mode Fracture Interfaces for the Modeling of Large-Scale FRP-Strengthened Beams, 259

Lee, Jaejun
Optimizing Rolling Patterns for Chip Seals Using Laboratory Aggregate Loss Performance Tests on Field Fabricated Samples, 1520

Lee, Jae-Yong, Ph.D.
see Shin, Sung Woo, Ph.D., 1425

Lee, Jay
see Li, Baoshun, 282

Lee, Jin Woo
see Kim, Hyung-Jun, 498

Lee, John D.
see Donmez, Birsen, 1831

Lee, Jong-Sub
Penetration Type Field Velocity Probe for Soft Soils, 792
see Lee, Changho, 824
see Lee, Changho, 1376

Lee, Joong Gwang
Frequency Methodology for Evaluating Urban and Highway Storm-Water Quality Control Infiltration BMPs, 1983

Lee, Jung-Yoon
Torsional Strength of RC Beams Considering Tension Stiffening Effect, 1741

Lee, Junhwan
Estimation of Lateral Load Capacity of Rigid Short Piles in Sands Using CPT Results, 779

Lee, Kah Ying
see Kodikara, Jayantha, 800

Lee, Kenneth Y.
Model to Describe the Binodal Curve on a Type 1 Ternary Phase Diagram, 686

Lee, Khil-Ha
Relative Comparison of the Local Recalibration of the Temperature-Based Evapotranspiration Equation for the Korea Peninsula, 1266
see Lee, Geun-Sang, 1139

Lee, Kwang-Sub, Ph.D.
Travelers' Response to Value Pricing: Application of Departure Time Choices to TRANSIMS, 1875

Lee, Kyungkoo, P.E.
see Lee, Cheol-Ho, 1623

Lee, Luke S.
Time-Dependent Reliability Analysis of FRP Rehabilitated Pipes, 203

Lee, M. H.
see Tserng, H. Ping, 334

Lee, M. S.
see Lin, C. E., 2111

Lee, Man-hyung
see Park, Moonseo, 383

Lee, N. K.
see Chung, S. G., Ph.D., 836

Lee, Pedro J.
Quantifying Linearization Error When Modeling Fluid Pipeline Transients Using the Frequency Response Method, 1029

Lee, Renee
see Fan, Yueyue, 1182

Lee, Sang-Ho
see Kim, Bong-Geun, 290

Lee, SangHyun
see Buwanpura, Janaka, 2231

Lee, Seol
see Yang, Keun-Hyeok, 1443

Lee, Seung Rae
see Kim, Yun Ki, Ph.D., 797

Lee, Stephen L.
see Singh, Purnendu N., 1232

Lee, Taesam
see Salas, Jose D., 1086

Lee, Tai Sik
see Bernold, Leonhard E., 317

Lee, Won K., P.E.
Modeling Residual Displacements of Concrete Bridge Columns under Earthquake Loads Using Fiber Elements, 117

Lee, Woo Hyoung
In Situ Microscale Analyses of Activated Sludge Flocs in the Enhanced Biological Phosphate Removal Process by the Use of Microelectrodes and Fluorescent In Situ Hybridization, 676

Lee, Woojin
see Lee, Changho, 824
see Lee, Changho, 1376
see Lee, Jong-Sub, 792

Lee, Yun-Hsuan
see Chen, Yit-Jin, 885

Lefèvre, L.
see Marcou, O., 1288

LeFevre, Nancy-Jeanne Bachmann
Hydrologic Performance Monitoring of an Underdrained Low-Impact Development Storm-Water Management System, 1237

Léger, Pierre
see Stefan, Lucian, 1710

Lehane, B. M.
see Leung, Y. F., 937

see O'Loughlin, C. D., 813

Lehman, Dawn E.
see Roeder, Charles W., 1757

Lei, Ma
see Abbas, Laith K., 62

Leicht, Robert M.
Implementing Observational Research Methods to Study Team Performance in Construction Management, 322
see Fox, Stephen, 81

Leichti, Robert J.
see Carroll, Cameron T., P.E., 1469

Leitão de Oliveira, Catarina Alexandra
see Negrão, João Henrique Jorge de Oliveira, 1729
see Negrão, João Henrique Jorge de Oliveira, 1730

Lemckert, C. J.
see Benfer, N. P., 2037

Lemnitzer, Anne
Nonlinear Efficiency of Bored Pile Group under Lateral Loading, 936

Lemos, Luís J. L.
see Oliveira, Paulo J. Venda, 778

Lenau, Charles W., P.E.
see O'Connell, Robert M., P.E., 1571

Lence, Barbara J.
see Lauzon, Nicolas, 298
see Liu, Joan C., 2035
see Yamini, Hamid, 1170

Leng, Chuntao
see Li, Baoshun, 282

Leng, Zhen
see Al-Qadi, Imad L., P.E., 1830

Lenke, Lary R.
see Bogus, Susan M., 1169

León, Arturo S., Ph.D.
Junction and Drop-Shaft Boundary Conditions for Modeling Free-Surface, Pressurized, and Mixed Free-Surface Pressurized Transient Flows, 1015

Leonard, Blaine, P.E.
Special Report: The Infrastructure Roundtables: Concluding Thoughts—Questions on the Five Key Solutions Round, 2185

Leonard, M.
see Wong, G., 1070

Leonard, Sunday A.
Contaminant Leaching from Stabilized/Solidified Acid Tars, 764

Leonello, Domenico
see Zanenga, Erminio, 58

Leong, Eng Choon
see Rahardjo, Harianto, 924

Lepech, Michael D.
see Zhang, Han, Ph.D., 1194
see Zhang, Han, Ph.D., 1195

Lesák, Jaroslav
see Válek, Jan, Ph.D., 1543

Leshchinsky, Dov
Exhumed Geogrid-Reinforced Retaining Wall, 902
Required Unfactored Strength of Geosynthetic in Reinforced Earth Structures, 801
Resultant Force of Lateral Earth Pressure in Unstable Slopes, 934
see Ling, Hoe I., 523

Lethanh, Nam
see Kobayashi, Kiyoshi, 1192

Leung, A. Y. T.
see Tang, L. C. M., 270

Leung, Dennis Y. C.
see Huang, H. B., 747

Leung, Li
see Goodchild, Anne, Ph.D., 1889

Leung, Mei-yung
Chinese Values and Stressors of Construction Professionals in Hong Kong, 442
Impacts of Stressors and Stress on the Injury Incidents of Construction Workers in Hong Kong, 423

Leung, W. L.
see Wong, S. C., 1815

Leung, Y. F.
Role of Linear Elasticity in Pile Group Analysis and Load Test Interpretation, 937
Theoretical Study on Pile Length Optimization of Pile Groups and Piled Rafts, 805

Lévesque, Y.
see Paultre, P., 1728

Levine, Jonah, M.S.
Energy Variability and Produced Water: Two Challenges, One Synergistic Management Approach Using Pumped Hydroelectric Energy Storage, 447

Levitt, Raymond E.
see Hartmann, Timo, 389
see Javernick-Will, Amy, 357
see Wong, Kenny, 358

Levy, Matthys, P.E.
Preserving Our Water Resources, 2162

Lewis, D. M.
Field Measurements of Mean Velocity Characteristics of a Large-Diameter Swirling Jet, 1007

Lewis, Don W.
see Minchin, R. Edward, 343

Lewis, Jonathan E.
see Hill, Howard J., 2148
see Hill, Howard J., 2149

Lewis, Paul, Ph.D.
see Torres, Juan, Ph.D., 1948

Lewis, Phil, Ph.D., P.E.
see Rasdorf, William, Ph.D., P.E., 1186

Li, Baoshun
3D Surface Modeling and Measuring System for Pneumatic Caisson, 282

Li, Bing
Seismic Behavior of Reinforced Concrete Exterior Wide Beam-Column Joints, 1608

Tests on Seismically Damaged Reinforced Concrete Structural Walls Repaired Using Fiber-Reinforced Polymers, 236

Verification of Nondimensional Energy Spectrum-Based Blast Design for Reinforced Concrete Members through Actual Blast Tests, 1669

Li, Bofeng

Global Navigation Satellite System Ambiguity Resolution with Constraints from Normal Equations, 1774

Li, C. G.

see Zhang, Z. T., 155

Li, C. Q.

Time-Dependent Risk Assessment of Combined Overtopping and Structural Failure for Reinforced Concrete Coastal Structures, 2038

Li, De-Ji

see Zhang, Jian-Min, 873

Li, Fengting

see Wang, Hongtao, 729

Li, Gang, Ph.D.

see Zou, Xiao-Kang, Ph.D., 1734

Li, Guihua

see Huang, Teng, 1769

Li, Heng

see Guo, H. L., Ph.D., 1321

see Li, Yan, Ph.D., 1944

Li, Hsin-Lung

see Chiang, Hsiao-Wei D., 448

Li, Hui

Reduction-Based Model Updating of a Scaled Offshore Platform Structure, 472

Li, J. C.

see Ma, G. W., 1667

Li, Jianzhong

see Guan, Zhongguo, 153

Li, Jinxuan

see Ma, Yuxiang, 467

Li, Li

Durability of Wet Bond of Hybrid Laminates to Cast-in-Place Concrete, 196

Implementation and Application of a New Elastoplastic Model Based on a Multiaxial Criterion to Assess the Stress State near Underground Openings, 13

see Hu, Liang, 568

Li, Lifeng

see Shao, Xudong, 104

Li, Lihua

Deformation Detection in the GPS Real-Time Series by the Multiple Kalman Filters Model, 1785

Li, Ling, Ph.D.

Kinetics of SO_2 Absorption with Fly Ash Slurry with Concomitant Production of a Useful Wastewater Coagulant, 645

Li, Lisha

see Amekudzi, Adjo A., Ph.D., 1584

Li, Lungui

Effect of Intermediate Diaphragms on Decked Bulb-Tee Bridge System for Accelerated Construction, 162

Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Concept Development, 125

Improved Longitudinal Joint Details in Decked Bulb Tees for Accelerated Bridge Construction: Fatigue Evaluation, 143

Li, Mingyong

see Wu, Qingbai, 175

Li, N.

see Cheng, Y. M., 899

Li, Peng

see Zhang, Xiong, 796

Li, Pengfei, Ph.D.

Stochastic Dilemma Hazard Model at High-Speed Signalized Intersections, 1835

Li, Pujian

see Liu, Jian, Ph.D., 1352

Li, Qiang, Ph.D.

see Wang, Kelvin C. P., 1792

Li, Qiming, Ph.D.

see Yuan, Jingfeng, Ph.D., 1326

Li, Qingbin

see Chen, Zhangfusheng, 496

Li, Qingfu

see Zhang, Peng, Ph.D., 1489

Li, Quan

see Fan, Jiansheng, 1692

Li, Quanwang

see Fan, Jiansheng, 1691

see Fan, Jiansheng, 1692

Li, Suzhen

Parametric Estimation for RC Flexural Members Based on Distributed Long-Gauge Fiber Optic Sensors, 1620

Li, Victor C.

see Zhang, Han, Ph.D., 1194

Li, Wang

see Qingsong, Wei, 1228

Li, Wen

see Isebrands, Hillary N., P.E., 1891

Li, X.

see Zhang, L. M., 912

Li, Xiaolin

see Yi-qiu, Tan, 1435

Li, Xiao-Ling

see Wu, Chang-Yong, 749

Li, Xiaopeng

Interpolating Surface Gravity Data for Assessing the Accuracy of a Ground Inertial Navigation System/Global Positioning System Gravimetric System, 1783

Li, Xinjun
Factors Study in Low-Temperature Fracture Resistance of Asphalt Concrete, 1355

Li, Xinpo
Seismic Displacement of Slopes Reinforced with Piles, 860

Li, Xuetao
see Binienda, Wieslaw K., 595

Li, Y. P.
Dual-Interval Fuzzy Stochastic Programming Method for Long-Term Planning of Municipal Solid Waste Management, 279

Li, Yan, Ph.D.
Transit-Oriented Land Planning Model Considering Sustainability of Mass Rail Transit, 1944

Li, Yaoliang
see Li, Baoshun, 282

Li, Yinghai
Novel Multiobjective Shuffled Frog Leaping Algorithm with Application to Reservoir Flood Control Operation, 1981

Li, Yu-Chao
Analytical Solutions for Contaminant Diffusion in Double-Layered Porous Media, 923

Li, Zhe
Using Soft Computing to Analyze Inspection Results for Bridge Evaluation and Management, 135

Li, Zhihong
Quantitative Risk Assessment of Cut-Slope Projects under Construction, 933

Li, Zhi-Hui
see Yi-qiu, Tan, 1434

Li, Zongjin
see Qin, Lei, 1494

Li, Zongzhi
see Madanu, Sunil, 1803

Lian, Yanqing
Improving HSPF Modeling Accuracy from FTABLES: Case Study for the Illinois River Basin, 1119

Liang, Ming-Te, Ph.D.
see Sun, Yung-Ming, Ph.D., 1477

Liang, Q.
see Kesserwani, G., 1010

Liang, Qiuhua
Flood Simulation Using a Well-Balanced Shallow Flow Model, 1011

Liang, Robert
Multicriteria Decision-Making Approach for Highway Slope Hazard Management, 1167

Liang, Robert Y., ed.
Deep Foundations and Geotechnical In Situ Testing (GSP 205), 2233

Estimating Subgrade Reaction Modulus for Transversely Isotropic Rock Medium, 880

Liang, S. H.
see Tsai, T. T., 642

Liang, Xi-feng
see Liu, Tang-hong, 1879

Liang, Zach
see Lee, George C., 1658

Liao, Hung-Jiun
see Hu, I-Chou, 1533

Liao, Tsai-Yun
Development and Empirical Study of Real-Time Simulation-Based Dynamic Traffic Assignment Model, 1897

Lichten, Keith, P.E., ed.
see Struck, Scott, Ph.D., ed., 2262

Lichti, D. D.
Propagation of an Unmodeled Additive Constant in Range Sensor Observations, 1779

Licon-Lozano, Alicia
see Jáuregui, David V., P.E., 111

Liedl, R.
see Philipp, A., 972

Liggio, Carl D.
see Lade, Poul V., 822

Lightbody, Anne F., Aff.ASCE
see Radspinner, R. R., 1045
see Rominger, Jeffrey T., 1047

Lignos, Dimitrios G.
Fragility Assessment of Reduced Beam Section Moment Connections, 1720

Ligozio, Christopher A., P.E.
see Mehrabi, Armin B., 128

Lili, Wu
Wind-Induced Response Characteristics of Monolayer Cable Net, 490

Lillibridge, John L.
see Singhal, Gaurav, 2060

Lim, Chee Leong
see Li, Bing, 236
see Li, Bing, 1669

Lim, Clark
see Lovegrove, Gord, 1802

Lim, Jay Na
Tailoring Competitive Advantages Derived from Innovation to the Needs of Construction Firms, 371

Lim, Tae-Kyung
see Lee, Dong-Eun, 313

Lim, Teik-Cheng
In-Plane Stiffness of Semiauxetic Laminates, 576

Lin, C. E.
Integrated Water Resource Management for Kaoping River Basin, 2111

Lin, Chi-Chwen
see Lee, Hsien-Yi, 2097

Lin, Chien-Liang, Ph.D.
Improved Baseline Productivity Analysis Technique, 351

Lin, Guoyu
see Liu, Ruijie, 526

Lin, Hong
see Sansalone, John, 628

Lin, Jun-Hong
see Cheng, Li-Lin, 2122

Lin, Lee-Kuo
Evaluation of Geofoam as a Geotechnical Construction Material, 1357

Lin, Liang-Tay
Synchronized Signal Control Model for Maximizing Progression along an Arterial, 1866

Lin, Lian-Shin
see Zhang, Ning, 731

Lin, M. Y.
see Wang, C. H., 575

Lin, Q. G., Ph.D., P.Eng.
Inexact Community-Scale Energy Systems Planning Model, 1939

Lin, Shiang-Ling
see Han, Jen-Yu, 1768

Lin, Wei
see Liu, Ning, Ph.D., 1037

Lin, Weiqi
see Liu, Xinan, 2041

Lin, Xiaobin
see Ooi, Phillip S. K., P.E., 95
see Ooi, Phillip S. K., P.E., 96

Lin, Yu-Yuan
Estimation of Maximum Roof Displacement Demands in Regular Multistory Buildings, 459

Lin, Zhenzhi
Evaluation of Black-Start Schemes Employing Entropy Weight-Based Decision-Making Theory, 451

Lindell, Michael K.
Tsunami Preparedness on the Oregon and Washington Coast: Recommendations for Research, 2085

Linder, Ernst
see Ossenbruggen, Paul J., 1836

Linderman, Lauren E.
Characterization of Wireless Smart Sensor Performance, 601

Lindquist, Doug, P.E.
see Stuedlein, Armin W., Ph.D., P.E., 851

Line, Philip
see Hindman, Daniel P., 1482
see Hindman, Daniel P., 1483

Ling, D. S.
see Chen, R. P., 850

Ling, Florence Yean Yng
Factors Affecting Construction Project Outcomes: Case Study of Vietnam, 1596
Political, Economic, and Legal Risks Faced in International Projects: Case Study of Vietnam, 1597

Ling, Hoe I.
Finite-Element Simulations of Full-Scale Modular-Block Reinforced Soil Retaining Walls under Earthquake Loading, 523

Lingard, Helen
Work-Family Conflict in Construction: Case for a Finer-Grained Analysis, 433

Lipari, Giordano
see Cuthbertson, Alan J. S., 5

Lipnicky, Kevin
Influence of HOV Lane Access on HOV Lane Utilization, 1899

Litrico, X.
see Munier, S., 1274

Little, Dallas, P.E.
see Caro, Silvia, 1382

Little, Dallas N., P.E.
Addressing Sulfate-Induced Heave in Lime Treated Soils, 784

Liu, B.
Volumetric Filtration of Rainfall Runoff. I: Event-Based Separation of Particulate Matter, 759
see Sansalone, J., 760

Liu, Baicang
Two-Dimensional LDV Measurement, Modeling, and Optimal Design of Rectangular Primary Settling Tanks, 669

Liu, Bo
see Lixin, Yi, 2081

Liu, C. Y.
see Wong, S. C., 1815

Liu, Changzheng
see Fan, Yueyue, 1182

Liu, Dajin, P.E.
End Forces on Crossframes in Horizontally Curved Steel I-Girder Bridges, 2130

Liu, Fang, Ph.D.
see Xu, Qiyong, Ph.D., P.E., 2118

Liu, Gang
Characterization of Organic Surfactant on Montmorillonite Nanoclay to Be Used in Bitumen, 1431
see Wu, Shaopeng, 1427

Liu, Hongyan
see van de Lindt, John W., 1611

Liu, Hsing-Chang
see Yang, Chieh-Hou, 848

Liu, Huabei
see Ling, Hoe I., 523

Liu, J. K.
see Chien, H. Y., 681

Liu, Jian, Ph.D.
Laboratory Test and Numerical Simulation of Time-Dependent Thermomechanical Behavior of the Three-Gorges Dam, 1352

Liu, Jiankun
Experimental Study on the Stability of Railroad Silt Subgrade with Increasing Train Speed, 855

Liu, Jih-Hung
see Yang, Chou-Ping, 2107

Liu, Jiliang
Iterative Formulas and Estimation Formulas for Computing Normal Depth of Horseshoe Cross-Section Tunnel, 1286

Liu, Jin
see Jiang, Hongtao, 1493

Liu, Joan C.
Direct Joint Probability Method for Estimating Extreme Sea Levels, 2035

Liu, Juanyu
see Zhang, Xiong, 796

Liu, Judy
see Lombardi, Nicolas J., 45

Liu, Kun-Hsing
see Kao, Jehng-Jung, 662

Liu, Lei
see Huang, Yongtai, 724
see Zou, Rui, Ph.D., 294

Liu, Li
see Li, Yinghai, 1981

Liu, Liang Y.
see Hwang, Seokyon, 418
see Peña-Mora, Feniosky, 289

Liu, Lichen
Quantitative Delimitation of Metropolitan Areas Based on a Synthetic Method: Case Study in the Lanzhou Metropolitan Area, 1956

Liu, Ning, Ph.D.
Draining the Tangjiashan Barrier Lake, 1037

Liu, Pan, Ph.D.
How Lane Arrangements on Freeway Mainlines and Ramps Affect Safety of Freeways with Closely Spaced Entrance and Exit Ramps, 1854
Performance Evaluation of No Track Thermoplastic Traffic Markings, 1896

Liu, Rengkui, Ph.D.
Research on a Short-Range Prediction Model for Track Irregularity over Small Track Lengths, 1905

Liu, Ruijie
Transformation of the Sandler and Rubin Nonsmooth Cap Model to the Pelessone Smooth Cap Model, 526

Liu, Ruimin
see Gong, Yongwei, Ph.D., 1161

Liu, Shu-Shun
Profit Optimization for Multiproject Scheduling Problems Considering Cash Flow, 440

Liu, Shuxue
see Ma, Yuxiang, 467

Liu, Tang-hong
Aerodynamic Effects Caused by Trains Entering Tunnels, 1879

Liu, Tiancheng
see Ning, Ping, 770

Liu, Tianyun
see Chen, Zhangfusheng, 496

Liu, W. G., Ph.D.
see Yang, Q. R., 501

Liu, Wei-Lien, Ph.D.
see Hanson, James L., Ph.D., P.E., 169

Liu, Xian, ed.
see Tonon, Fulvio, ed., 2232

Liu, Xiaofeng, Ph.D.
see León, Arturo S., Ph.D., 1015

Liu, Xiaoyun
see Lv, Pengmin, 475

Liu, Xi-La
see Wang, Xiao-Hui, 1506

Liu, Xinan
Laboratory Study of Low-Frequency Waves Induced by Random Gravity Waves on Sloping Beaches, 2041

Liu, Yong, Ph.D.
see Zou, Rui, Ph.D., 294

Liu, Yongzhi
see Wu, Qingbai, 175

Liu, Yu
Postprocessing Method for Dynamic Modulus Tests of Hot-Mix Asphalt, 1415

Liu, Yue
see Ma, Wanjing, 1901

Liu, Zhao
see He, Zhi-Qi, 1712

Liu, Zheng
Exploring the Relationship between Soil Properties and Deterioration of Metallic Pipes Using Predictive Data Mining Methods, 288

Liu, Zhijun
see Xia, Meng, 725

Liu, Zhugang "Amos", P.E.
Gateway to a Getaway, 2224

Liuzzi, G. Trisorio
see Bisantino, T., Ph.D., 947

Liuzzo, Lorena, Ph.D.
Basin-Scale Water Resources Assessment in Oklahoma under Synthetic Climate Change Scenarios Using a Fully Distributed Hydrologic Model, 1068

Lixin, Yi
Land Subsidence Disaster Survey and Its Economic Loss Assessment in Tianjin, China, 2081

Lizcano, A.
see Wichtmann, T., 845

Llopis-Albert, C.
Stochastic Simulation of Non-Gaussian 3D Conductivity Fields in a Fractured Medium with Multiple Statistical Populations: Case Study, 1112

Lo, Hing-Po
see Oo, Bee-Lan, 386

Lo, Irene M. C.
see Ng, Kelvin T. W., 2116

Lo, S.-C. R.
see Piratheepan, J., 1396

Lobbrecht, Arnold
see van Andel, Schalk Jan, 1244

The Local Roads and Streets Committee of the Transportation and Development Institute (T&DI) of ASCE
Footprint Design Manual for Local Roads, 2244

Loferski, Joseph R.
see Hindman, Daniel P., 1482
see Hindman, Daniel P., 1483

Loge, Frank J.
see Camarillo, Mary Kay, 739

Lombardi, Nicolas J.
Steel Hexagonal Honeycomb Core Equivalent Elastic Moduli for Bridge Deck Sandwich Panels, 45

Longinow, Anatol
see Pape, Ronald, 2143
see Pape, Ronald, 2144
see Pape, Ronald, 2145

Lopes, João E. G., Ph.D.
see Hidalgo, Ieda G., Ph.D., 456

Lopes, Vicente L.
see Moltz, Heidi L. N., 1088
see Vogl, Adrian L., 1239

Lopez, Maria M.
see Coronado, Carlos A., 178
see Lee, Jae Ha, 259

López, Ricardo
see Nadal, Norberto C., 1992

Lopez, Robert
Design Error Classification, Causation, and Prevention in Construction Engineering, 1536

Lopez-Anido, Roberto A., P.E.
see Alvarez-Valencia, Daniel, 1484

Loprencipe, Giuseppe
see Cantisani, Giuseppe, 1876

Lord, Dominique, P.Eng.
see Fitzpatrick, Kay, P.E., 1877

Lorenz, Emily, P.E.
see Kestner, Dirk M., P.E., 2285

Lorenzoni, Carlo
Working of Defense Coastal Structures Dissipating by Macroroughness, 2036

Lotfallah, Wafik
see El Asmar, Mounir, 405

Lothian, Aileen, Ph.D.
see Jewers, Sam, 1598

Loukakis, Kostas, P.E
see Karapiperis, Dennis, 2201

Lourenço, Paulo B.
see Haach, Vladimir G., 1653
see Oliveira, Daniel V., Ph.D., 207

Love, Peter E. D.
Occupational Licensing of Building Trades: Case of Western Australia, 1603
Price Competitive Alliance Projects: Identification of Success Factors for Public Clients, 409
Rework in Civil Infrastructure Projects: Determination of Cost Predictors, 342
Work Stress, Support, and Mental Health in Construction, 379
see Lopez, Robert, 1536

Lovegrove, Gord
Community-Based, Macrolevel Collision Prediction Model Use with a Regional Transportation Plan, 1802
see Khondakar, Bidoura, 1882

Lovejoy, Steven C.
see Schumacher, Thomas, 1839

Lovisa, Julie
Consolidation Behavior of Soils Subjected to Asymmetric Initial Excess Pore Pressure Distributions, 31

Lövstedt, Charlotta Borell, Ph.D.
Wave Damping in Reed: Field Measurements and Mathematical Modeling, 966

Low, Han Eng
Strength Measurement for Near-Seabed Surface Soft Soil Using Manually Operated Miniature Full-Flow Penetrometer, 925

Low, Sui Pheng
see Koh, Tas Yong, 1330
see Wu, Peng, 1588

Lowe, Steven R., P.E.
Under Control, 2214

Lowry, Gregory V.
see Khaitan, Sameer, 726

Loya, J. A.
First-Order Solutions for the Buckling Loads of Euler-Bernoulli Weakened Columns, 525

Lozano, David
see Castro-Orgaz, Oscar, 1268

Lu, De-Chun
see Du, Xiu-Li, 464

Lu, J.
see Tuutijärvi, T., 712

Lu, Jian
see Ashuri, Baabak, 436

Lu, Jian John, Ph.D., P.E.
see Liu, Pan, Ph.D., 1854
see Liu, Pan, Ph.D., 1896

Lu, Ming
see Dai, Fei, 339

Lu, Ning
Is Matric Suction a Stress Variable?, 3

Lu, Peiyin
see Chen, Zhangfusheng, 496

Lu, Ronghu
Treatment of Drilling Wastewater by Combined Coagulation-Ultraviolet/Fenton-Pressurized Biological Processes, 641

Lu, Weisheng
Improved SWOT Approach for Conducting Strategic Planning in the Construction Industry, 445

Lu, X. Z.
see Godat, A., 202

Lu, Xiaohua
see Yuan, Songhu, Ph.D., 719

Lu, Xilin
Length Scales Interaction in Nonlocal Plastic Strain Localization of Bars of Varying Section, 561

Lu, Ye
see Tan, Yong, 1504

Lu, Youyuan
see Qin, Lei, 1494

Lu, Zhao-Hui
Empirical Stress-Strain Model for Unconfined High-Strength Concrete under Uniaxial Compression, 1476

Lucas, H. J.
see Strom, K. B., 991

Lucas, William C.
Design of Integrated Bioinfiltration-Detention Urban Retrofits with Design Storm and Continuous Simulation Methods, 1104

Luchsinger, Rolf H.
see Wever, Thomas E., 1649

Lucko, Gunnar, Ph.D.
Quantitative Research: Preparation of Incongruous Economic Data Sets for Archival Data Analysis, 319
Research Validation: Challenges and Opportunities in the Construction Domain, 327

Luco, J. E.
Acceleration Tracking Performance of the UCSD-NEES Shake Table, 1656

Luco, J. Enrique
see Turmo, José, 602

Lukaszewska, E., Ph.D.
Laboratory Tests and Numerical Analyses of Prefabricated Timber-Concrete Composite Floors, 1610

Lumsden, Sarah
see Jewers, Sam, 1598

Lund, Jay R.
see Marques, Guilherme Fernandes, 1998

Lung, Wu-Seng
see Yang, Chou-Ping, 2107

Luo, Hongbing
see Xu, Rui, 2102

Luo, Jungang
Parameter Estimation for Nonlinear Muskingum Model Based on Immune Clonal Selection Algorithm, 1140

Luo, Lin
see Liu, Baicang, 669
see Xu, Rui, 2102

Luo, Rong, Ph.D.
Characterization of the Tensile Viscoelastic Properties of an Undamaged Asphalt Mixture, 1808

Luo, Xiufeng
see Su, Cheng, 119

Luo, Y. Z.
see Shen, Yan-Bin, Ph.D., 428

Luo, Yaozhi
see Xu, Xian, 1709

Luo, Yun-Biao
see Wu, Gang, 1462

Luxmy, Begum Shaila
see Hashimoto, Toshikazu, 711

Lv, Bo
see Wang, Zong-ping, 626

Lv, Pengmin
Dynamic Response Solution in Transient State of Viscoelastic Road under Moving Load and Its Application, 475

Lv, Qian Lei
see Zhao, Zhen Yu, Ph.D., 380

Lykidis, Georgios, Ph.D.
see Karapiperis, Dennis, 2201

Lyn, D. A.
see Hahn, E. M., 955

Lynett, Patrick J.
see Wu, Chin H., 2039

Lyons, Christopher
see Davids, William G., P.E., 97

Lytton, Robert, Ph.D., P.E.
see Ghanem, Hassan, Ph.D., 1441

Lytton, Robert L., Ph.D., P.E.
see Luo, Rong, Ph.D., 1808

Ma, Baosong
Risk Evaluation for Maxi Horizontal Directional Drilling Crossing Projects, 1572

Ma, G. W.
Simplified Damage Assessment Method for Buried Structures against External Blast Load, 1667

Ma, Jia
Transport and Distribution of Particulate Matter Phosphorus Fractions in Rainfall-Runoff from Roadway Source Areas, 744

Ma, Jian-liang
see Shi, Peng, 1093

Ma, Jiming
see Chen, Xiaoli, Ph.D., 974

Ma, Jun
see Liu, Baicang, 669

Ma, Lena Q.
see Sun, Huiming, 756

Ma, Tian-Wei
Improved Decentralized Method for Control of Building Structures under Seismic Excitation, 524
see Sebastijanovic, Nebojsa, 578

Ma, Wanjing
Investigating the Impacts of Green Signal Countdown Devices: Empirical Approach and Case Study in China, 1901

Ma, Yuxiang
Laboratory Study of Unidirectional Focusing Waves in Intermediate Depth Water, 467

Ma, Zhongguo John
see Li, Lungui, Ph.D., 143
see Nordin, Curtis, 198
see Zhu, Peng, 160

Ma, Zhongguo (John)
see Li, Lungui, 125

Maakaroun, Tarek
see Najjar, Shadi S., 898

Maćešić, Senka
see Škifić, Jerko, 993

Machell, J.
see Mounce, S. R., 1990

Machemehl, Randy B.
see Wang, Feng, 1860

Macioce, Thomas
see Naito, Clay, 133

MacKenzie, Ken
see Guo, James C. Y., 761

Macorini, Lorenzo
see Gattesco, Natalino, 1626

MacWilliams, Michael L.
Assessment of the Effectiveness of a Constructed Compound Channel River Restoration Project on an Incised Stream, 1051

Madanat, Samer
Empirical Modeling of Pavement Overlay Crack Progression with Field Data, 1193

Madanat, Samer M.
see Anani, Shadi B., Ph.D., P.E., 1881

Madanu, Sunil
Life-Cycle Cost Analysis of Highway Intersection Safety Hardware Improvements, 1803

Maddux, David C.
see Schnabel, William E., 171

Madhyannapu, Raja Sekhar, Ph.D.
Quality Assessment and Quality Control of Deep Soil Mixing Construction for Stabilizing Expansive Subsoils, 785

Madramootoo, Chandra A.
see Prasad, K. S. Hari, 1283

Magalhães, Filipe
see Reynders, Edwin, 527

Magent, Christopher
see Korkmaz, Sinem, 80

Maghrebi, Mahmoud F.
Discharge Estimation in a Tidal River with Partially Reverse Flow, 2053

Magill, Natalie
Distribution of Particulate-Bound Metals for Source Area Snow in the Lake Tahoe Watershed, 629

Magliola, Robert, P.E.
see Liu, Dajin, P.E., 2130

Magnucki, K.
Elastic Buckling of Cold-Formed Thin-Walled Channel Beams with Drop Flanges, 1695

Mahalingam, Ashwin
PPP Experiences in Indian Cities: Barriers, Enablers, and the Way Forward, 356

Mahato, P. K.
Flutter Control of Smart Composite Structures in Hygrothermal Environment, 73

Mahdi, Tew-Fik
see Gaucher, Jérémie, 1036

Mahinthakumar, Kumar G.
see Mirghani, Baha Y., 306

Mahmood, Rezaul
see You, Jinshing, 1076

Mahmood, Talat, Ph.D., P.E.
Benthal Solids Properties Influencing ASB Design and Operating Practices, 633

Mahmoud, Enad
Comprehensive Evaluation of AIMS Texture, Angularity, and Dimension Measurements, 1381
Discrete Element Analysis of the Influences of Aggregate Properties and Internal Structure on Fracture in Asphalt Mixtures, 1341
see Alvarez, Allex E., 1470

Mahmoud, Mohamed
Simultaneous Organic and Nutrient Removal in a Naturally Ventilated Biotower Treating Presettled Municipal Wastewater, 644

Mahmoudabadi, Ehsan
see Mostofinejad, Davood, 255

Mahoney, Joe P.
see Muench, Stephen T., P.E., 1914

Maia de Oliveira, Francisco Miguel
see Negrão, João Henrique Jorge de Oliveira, 1729
see Negrão, João Henrique Jorge de Oliveira, 1730

Maidment, David
see Martínez, Sergio I., 1976

Maier, H. R.
see Broad, D. R., 2002
see Gibbs, M. S., 1988

Maier, Holger R.
see Gibbs, Matthew S., 2008
see Wu, Wenyan, 1974
see Wu, Wenyan, 2015

Mailhot, Alain
Design Criteria of Urban Drainage Infrastructures under Climate Change, 1979
see Poulin, Annie, 2025

Main, Joseph A.
see Coffman, Bradley F., 1681

Mair, Alan
Assessing Rainfall Data Homogeneity and Estimating Missing Records in Mākaha Valley, O'ahu, Hawai'i, 1062

Mair, R. J.
see Marshall, A. M., 935

Mairaing, Warakorn
see Jotisankasa, Apiniti, 826

Maiti, D. K.
see Mahato, P. K., 73

Maitra, Bhargab
see Basu, Debasis, 1928
see Basu, Debasis, 1941
see Chintakayala, Phani Kumar, 1921

Maitra, Swati Roy
Load Transfer Characteristics of Aggregate Interlocking in Concrete Pavement, 1810

Maji, Arup K.
see Urgessa, Girum S., 542

Majorana, C. E.
Large Membrane Roof Analysis: Nonlinear Modeling of Structures, Connectors, and Experimental Evidences, 93

Majumdar, P. K.
see Mishra, G. C., 1293

Makaratat, Nattapong
Effects of Calcium Carbide Residue–Fly Ash Binder on Mechanical Properties of Concrete, 1474

Makris, Nicos
see Dimitrakopoulos, Elias, 489
see Karavasilis, Theodore L., 1698

Makropoulos, Christos
see Rozos, Evangelos, 2012

Maksimović, Čedo
see Lari, Kaveh Sookhak, 1005

Malama, Joels C., P.E., ed.
see Goss, Christoph M, Ph.D., P.E., ed., 2249

Malasavage, Nicholas E.
see Chrysochoou, Maria, 877
see Grubb, Dennis G., 875
see Grubb, Dennis G., 876

Malek-Mohammadi, Siamak
New Methodology for Laboratory Generation of Solitary Waves, 2055

Malhotra, Sanjeev, P.E.
Supporting the Winds of Change, 2205

Maljaars, J.
Local Buckling of Fire-Exposed Aluminum Members: New Design Model, 1612

Malla, Ramesh B., Ph.D., ed.
see Song, Gangbing, Ph.D., ed., 2236

Mallinckrodt, Jack, Ph.D.
VCI, a Regional Volume/Capacity Index Model of Urban Congestion, 1801

Malone, Linda
see Serag, Engy, Ph.D., 415

Maltauro, Alessandro
see Gregoretti, Carlo, 1033

Malzone, Chris
see Simmons, Stephen M., 945

Mampearachchi, W. K.
Finite-Element Model Approach to Determine Support Conditions and Effective Layout for Concrete Block Paving, 1471

Mancinelli, Alessandro
see Lorenzoni, Carlo, 2036

Mander, John B.
see Hamid, N. H., Ph.D., 1686
see Mander, Thomas J., 142

Mander, Thomas J.
Experimental Performance of Full-Depth Precast, Prestressed Concrete Overhang, Bridge Deck Panels, 142

Mandrup-Poulsen, Jan
see Xia, Meng, 725

Maneta, Marco P.
see Singh, Purnendu N., 1232

Manfredi, G.
see Di Ludovico, M., 228

Manfredi, Gaetano
see Asprone, Domenico, Ph.D., 239
see Di Ludovico, Marco, 231
see Di Ludovico, Marco, 235
see Nardone, Fabio, Ph.D., 1752

Mangiavillano, M. L., Ph.D.
see Badalamenti, V., 482

Maniar, Dilip R.
see Vásquez, L. F. Gonzalo, 886

Manna, B.
Nonlinear Dynamic Response of Piles under Horizontal Excitation, 929

Mannering, Fred L.
see Anastasopoulos, Panagiotis Ch., 403
see Anastasopoulos, Panagiotis Ch., 1189
see Bhargava, Abhishek, 434
see Hubbard, Sarah M. L., 1
see Valentin, Vanessa, 1850

Mannina, Giorgio
see Freni, Gabriele, 1986

Manning, Andrew James
see Mikeš, Daniel, 2057

Manshadi, Behzad D.
see Keller, Thomas, 224

Manzano, Juan
see Martí, Pau, 1218

Manzur, Tanvir
see Yazdani, Nur, Ph.D., 1508

Mao, Baohua, ed.
Traffic and Transportation Studies 2010, 2289

Mara, T. G.
Effects of a Construction Tower Crane on the Wind Loading of a High-Rise Building, 1749

Maraghechi, Hamed
see Rajabipour, Farshad, 1480

Maranian, Peter, P.E., S.E.
Reducing Brittle and Fatigue Failures in Steel Structures, 2274

Marano, Giuseppe Carlo
see Monti, Giorgio, 278

Marasteanu, Mihai
see Khazanovich, Lev, 541

Marasteanu, Mihai O.
see Li, Xinjun, 1355

Marche, Claude
see Gaucher, Jérémie, 1036

Marcou, O.
Lattice Boltzmann Model for the Simulation of Flows in Open Channels with Application to Flows in a Submerged Sluice Gate, 1288

Marcus, Jon
see Simmons, Stephen M., 945

Marcuzzi, Andrea
Dynamic Identification of a Concrete Bridge with Orthotropic Plate-Type Deck, 1666

Marek, Pavel
see Václavek, Leo, 2136

Marella, Aravind
see Reddy, Krishna R., 2100

Margeta, Jure, Ph.D., P.E.
see Glasnovic, Zvonimir, Ph.D., P.E., 458

Marin-Artieda, Claudia C., P.E.
Theoretical Studies of the XY-FP Seismic Isolation Bearing for Bridges, 154

Marinho, Fernando A. M.
see Travis, Quentin B., 869

Marino, Giuliano
see Borrelli, Rosario, 72

Mariño, Miguel A.
see Afshar, Abbas, 1964

Marion, Andrea
see Tregnaghi, Matteo, Ph.D., 964

Marjerison, Brent, P.E.
see Berthelot, Curtis, Ph.D., P.E., 1806

Marjetič, Aleš
Statistical Properties of Strain and Rotation Tensors in Geodetic Network, 1778

Marques, Guilherme Fernandes
Modeling Conjunctive Use Operations and Farm Decisions with Two-Stage Stochastic Quadratic Programming, 1998

Marques, Rui Cunha
Revisiting the Strengths and Limitations of Regulatory Contracts in Infrastructure Industries, 1197

Marsh, Krista
SuretyAssist: Fuzzy Expert System to Assist Surety Underwriters in Evaluating Construction Contractors for Bonding, 435

Marshall, A. M.
Tunneling beneath Buried Pipes: View of Soil Strain and Its Effect on Pipeline Behavior, 935

Martchouk, Mary, Ph.D.
see Brennan, Thomas M., Ph.D., P.E., 1907

Martí, Pau
Generalization of ET_o ANN Models through Data Supplanting, 1218

Integrated Emitter Local Loss Prediction Using Artificial Neural Networks, 1200

Marti, Peter
see Wever, Thomas E., 1649

Martin, Amy Epps, P.E.
see Alvarez, Allex E., 1403
see Alvarez, Allex E., 1470

Martin, Tim C.
Experimental Estimation of the Relative Deterioration of Surface Maintenance Treatments, 1788

Martinez, A.
see Moreno, M. A., Ph.D., 1246

Martinez, Carlos Barreira
see Faria, Marco Tulio C., 1038

Martinez, Christopher J.
Estimating Reference Evapotranspiration with Minimum Data in Florida, 1254

Martínez, José Manuel
see Pantaleón, Marcos J., 156

Martinez, Julio C.
Methodology for Conducting Discrete-Event Simulation Studies in Construction Engineering and Management, 315

Martínez, Sergio I.
Linking GIS, Hydraulic Modeling, and Tabu Search for Optimizing a Water Level-Monitoring Network in South Florida, 1976

Martín-Lara, M. A.
Sorption of Cr (VI) onto Olive Stone in a Packed Bed Column: Prediction of Kinetic Parameters and Breakthrough Curves, 766

Martino, R.
see Carravetta, A., 1027

Marulanda, Johannio
see Moncayo, Hever, 49

Marzouk, Mohamed
Modeling Microtunneling Projects using Computer Simulation, 381

Masad, Eyad, P.E.
see Alvarez, Allex E., 1470
see Arambula, Edith, 1407
see Caro, Silvia, 1382
see Mahmoud, Enad, 1341
see Mahmoud, Enad, 1381

Maselko, Maciej
see Schnabel, William E., 171

Mashahir, Mohammad B.
Application of Riprap and Collar to Prevent Scouring around Rectangular Bridge Piers, 962

Masia, Mark J.
see Choi, Kyoung-Kyu, 256
see Petersen, Robert B., 250
see Petersen, Robert B., 251

Maslia, Morris L.
see Aral, Mustafa M., 1959

Masmoudi, Radhouane
see Mohamed, Hamdy M., 199

Masoero, E.
Progressive Collapse Mechanisms of Brittle and Ductile Framed Structures, 556

Mason, Greg, Ph.D., P.E.
Program Assessment and Evaluation Using Student Grades Obtained on Outcome-Related Course Learning Objectives, 1602

Mason, James A.
Compression Performance of Steel Pipelines with Welded Slip Joints, 1561
Direct Tension Performance of Steel Pipelines with Welded Slip Joints, 1578

Massam, Laurent
see Bentz, Evan C., 240

Masters, F. J.
see Prevatt, D. O., 2092

Matasovic, Neven
see Zekkos, Dimitrios, 895

Matel, Larry John, P.E.
An Urban Approach to LID, 2208

Mateos, Luciano
see Castro-Orgaz, Oscar, 1268

Mathew, Tom V.
Calibration of Microsimulation Models for Nonlane-Based Heterogeneous Traffic at Signalized Intersections, 1923
see Mishra, Sabyasachee, 1819

Mathur, B. S.
see Sarkar, S., 1121

Mathur, Shashi
see Prasad, Ram Kailash, 2101

Mathur, Shobhit
see Peña-Mora, Feniosky, 289

Matsumoto, Takashi, Ph.D.
see Gautam, Bishnu Prasad, M.E., 209

Matsuura, Takeshi
see Dang, Huyen T., 740

Matta, Fabio
see Ferraro, Rossella M., 1464

Matthews, H. Scott
see Bilec, Melissa M., 1184
see Blackhurst, Michael, P.E., 91

Matthys, S.
see Toutanji, H., 182

Maturana, Sergio
see González, Vicente, 426

Mauro, Raffaele
Comparative Analysis of Compact Multilane Roundabouts and Turbo-Roundabouts, 1823

Maurya, Nityanand Singh
Biosorptive Color Removal: Applicability of Equilibrium Isotherm Models, 2098

Mawer, R. W., Ph.D.
Reduced Modulus Action in U-Section Steel Sheet Pile Retaining Walls, 816

Mayfield, Roy T.
Simplified Approximation Procedure for Performance-Based Evaluation of Liquefaction Potential, 787

Mays, David C., P.E.
Contrasting Clogging in Granular Media Filters, Soils, and Dead-End Membranes, 665

Mazidi, A.
Flutter of a Swept Aircraft Wing with a Powered Engine, 65

Mazloumi, Ehsan
Delay Function for Signalized Intersections in Traffic Assignment Models, 1924
Using GPS Data to Gain Insight into Public Transport Travel Time Variability, 1855

Mazzucco, G.
see Majorana, C. E., 93

Mbele, Jean-Juste
see Voigt, Thomas, 1361

McAfee, Mark, ed.
Principles and Practice of Engineering: Architectural Engineering Sample Questions and Solutions, 2271

McCabe, Brenda
see Joseph, Shannon A., 1168

McCaffrey, Robert
see Pearson, Chris, 1776

McCarron, William O., Ph.D., P.E., ed.
see Goss, Christoph M, Ph.D., P.E., ed., 2249

McCarther, S. Marie, Ed.D.
see O'Bannon, Deborah J., Ph.D., P.E., 2075

McCartney, John S.
Centrifuge Permeameter for Unsaturated Soils. II: Measurement of the Hydraulic Characteristics of an Unsaturated Clay, 879
see Zornberg, Jorge G., 878

McComb, Ashley M.
see Cheng, Lijuan, 252

McConnell, Jennifer Righman
Moment-Rotation Response of Slender Steel I-Girders, 1756
Rotation Compatibility Approach to Moment Redistribution for Design and Rating of Steel I-Girder Bridges, 99
Rotation Requirements for Moment Redistribution in Steel Bridge I-Girders, 121

McCrary, Steven W., P.E.
Longitudinal Study of Innovative Contracting Practices in State Departments of Transportation, 1303

McCray, John E.
see Geza, Mengistu, 715

McCuen, Richard H.
Record Length Requirements for Annual Maximum Flood Series, 1126
see Rew, Stephanie N., 1271

McCullouch, Bob G., Ph.D., P.E.
see Anastasopoulos, Panagiotis Ch., 1189
see Anastasopoulos, Panagiotis Ch., 1196

McDonald, Richard
Modeling the Effect of Flow and Sediment Transport on White Sturgeon Spawning Habitat in the Kootenai River, Idaho, 1054

McDonald, Tom, P.E.
see Isebrands, Hillary N., P.E., 1891

McFarland, Anne
see Eck, Bradley, 1272

McFarland, D. M.
see Chen, Y., 1747

McGhee, Catherine
see Edara, Praveen, 2091

McKenna, Frank
Nonlinear Finite-Element Analysis Software Architecture Using Object Composition, 271

McLamore, Eric, Ph.D. Candidate
see Sharvelle, Sybil, 9

McLean, David
see ElGawady, Mohamed, 179

McNally, Ciaran
see Tabaković, Amir, 1413

McNames, Cassie, P.E.
see Gajan, Sivapalan, Ph.D., 2137

McNeil, Sue, P.E.
see Oswald, Michelle R., 1937

McNett, Jacquelyn K.
Establishing Storm-Water BMP Evaluation Metrics Based upon Ambient Water Quality Associated with Benthic Macroinvertebrate Populations, 673

McVay, Michael
see Klammler, Harald, 884

McWatters, Rebecca S.
Diffusive Transport of VOCs through LLDPE and Two Coextruded Geomembranes, 889

Md Diah, J.
Weaving Section Flow Model at the Weaving Area of Malaysian Conventional Roundabout, 1872

Medina, C.
see El Shamy, U., P.E., 32

Meehan, Christopher L.
see Leshchinsky, Dov, 801
see Leshchinsky, Dov, 902

Meeker, Donald T.
Proportion-Based Format System for Freeway and Expressway Guide Signs, 1818

Mefford, Brent
see Ho, Jungseok, 968

Megali, G.
Assessing Reliability and Potentiality of Nonnuclear Portable Devices for Asphalt Mixture Density Measurement, 1442

Meguid, M. A.
see Dang, H. K., 20

Mehamed, Yasser
see Buwanpura, Janaka, 2231

Mehndiratta, H. C.
see Kumar, Praveen, 1452

Mehrabi, Armin B.
Evaluation, Rehabilitation Planning, and Stay-Cable Replacement Design for the Hale Boggs Bridge in Luling, Louisiana, 128

Mehta, Kishor C., Ph.D., P.E.
Wind Loads: Guide to the Wind Load Provisions of ASCE 7-05, 2294

Meier, Matthew
see Moradkhani, Hamid, 1131

Meier, Roger, ed.
Soil Behavior and Geo-Micromechanics (GSP 200), 2280

Meille, Sylvain, Ph.D.
see Sanahuja, Julien, Ph.D., 483

Mekkawi, Hosnachah
see Sherif, Ahmed, 1600

Mekkawy, Mohamed M., Ph.D.
Performance Problems and Stabilization Techniques for Granular Shoulders, 1511

Mekky, W. F., Ph.D.
see El-Dakhakhni, W. W., Ph.D., P.E., 1527

Melby, Jeffrey A.
see Kobayashi, Nobuhisa, 2052

Melchior, Stefan
Results from 18 Years of In Situ Performance Testing of Landfill Cover Systems in Germany, 705

Melville, Bruce
see Dwivedi, Ambuj, 1019

Menassa, Carol
Hybrid Model Incorporating Real Options with Process Centric and System Dynamics Modeling to Assess Value of Investments in Alternative Dispute Resolution Techniques, 300

Study of Real Options with Exogenous Competitive Entry to Analyze Dispute Resolution Ladder Investments in Architecture, Engineering, and Construction Projects, 352

Menassa, Carol C.
Analysis of Dispute Review Boards Application in U.S. Construction Projects from 1975 to 2007, 1324

Mendes, E.
see Marcou, O., 1288

Méndez-Sánchez, Noemí
see Lange, Clifford R., 692

Meneses, Andrés Seco
see Chasco, Fco. de Asís Ramírez, 1301

Menesi, Wail
see Hegazy, Tarek, 421

Meng, Qiang
see Lee, Der-Horng, 1794

Mengü, Gulay Pamuk
Impact of Irrigation Management Transfer on Land and Water Productivity and Water Supply in the Gediz Basin, Turkey, 1233

Mercier, Guy
see Mouton, Julia, 728

Merkley, G. P.
see Jaafar, H. H., 1287

Mermerdaş, Kasım
see Güneyisi, Erhan, 1385

Mersereau, Russell M.
see Tsai, Yi-Chang, 1789

Merwade, Venkatesh
see Martínez, Sergio I., 1976
see Wilkerson, Jared, 1148

Messner, John I.
see Fox, Stephen, 81
see Korkmaz, Sinem, 80
see Leicht, Robert M., 322

Metcalfe, A. V.
see Wong, G., 1070

Mevel, Laurent
see Basseville, Michèle, 495

Meyer, Michael, Ph.D., P.E.
see Amekudzi, Adjo A., Ph.D., 1584

Mezzari, Isabella
see Barlaz, Morton A., 707

Miano, Giovanni
see Asprone, Domenico, Ph.D., 239

Michaelidou-Kamenou, Anastasia
see Christodoulou, Symeon E., 366

Michalowski, Radoslaw L.
Limit Analysis and Stability Charts for 3D Slope Failures, 831

Middleton, Campbell R.
see Hoult, Neil A., 109

Mignot, E.
Energy Dissipation and Turbulent Production in Weak Hydraulic Jumps, 952

Mignot, Emmanuel
see Ghostine, Rabih, 992

Mikeš, Daniel
Assessment of Flocculation Kinetics of Cohesive Sediments from the Seine and Gironde Estuaries, France, through Laboratory and Field Studies, 2057

Mikhail, Magdy
see Zhou, Fujie, 1827

Milberg, Colin T.
Tolerance and Constructability of Soldier Piles in Slurry Walls, 1507

Milella, P.
see Bisantino, T., Ph.D., 947

Miles, John
see Rezgui, Yacine, 370

Milheiro-Oliveira, Paula
see Simões, Maria de Lurdes, 1847

Milisavlevich, Branko M.
see Challamel, Noël, 536

Miller, Cass T.
see Boyer, Treavor H., 736
see Wright, Deona Johnson, 663

Miller, Grady L.
see Cardenas-Lailhacar, Bernard, 1220

Miller, John S., P.E.
Evaluating Unplanned Stand-Alone Transportation Projects: Linking Incremental and Comprehensive Planning, 1952

Miller, Joseph F.
New Yield Model for Wood Dowel Connections, 1731

Miller, Michael D., ed.
see Wong, C. Jerry, ed., 2253

Miller, Richard, P.E.
see Gedafa, Daba S., Ph.D., 1826

Miller-Hooks, Elise
see Chou, Chih-Sheng, 1868

Mills-Beale, Julian
see Liu, Yu, 1415

Milosevic, Igor N
Practical Application of SWOT Analysis in the Management of a Construction Project, 2070

Milutinovic, Milan
see Omerovic, Sanida, 1593

Milutinovic, Veljko
see Omerovic, Sanida, 1593

Min, Goh Jyh
see Huda, Zainul, 53

Min, Jiyoung
see Shin, Sung Woo, Ph.D., 1425

Minaie, E.
In-Plane Behavior of Partially Grouted Reinforced Concrete Masonry Shear Walls, 1715

Minchin, R. Edward
Owners Respond: Preferences for Task Performance, Delivery Systems, and Quality Management, 343

Minsker, Barbara
see Nicklow, John, 2001

Minsker, Barbara S.
see Singh, Abhishek, 283

Minville, Marie, Ph.D.
Impacts and Uncertainty of Climate Change on Water Resource Management of the Peribonka River System (Canada), 1997

Mir, M. S.
Space Development Modeling of Urban Regions in Developing Countries, 1925

Mirakbari, M.
Regional Bivariate Frequency Analysis of Meteorological Droughts, 1154

Miranda, Eduardo
see Lignos, Dimitrios G., 1720
see Lin, Yu-Yuan, 459

Mirghani, Baha Y.
Grid-Enabled Simulation-Optimization Framework for Environmental Characterization, 306

Mishra, G. C.
Unsteady Solution for Well Recharge in a Low Diffusive Aquifer, 1293

Mishra, S.
see Khasnabis, S., 1927

Mishra, Sabyasachee
Single-Stage Integer Programming Model for Long-Term Transit Fleet Resource Allocation, 1819

Misra, Debasmita
see Nimmer, Mike, 1152

Mistry, Dina
see Love, Peter E. D., 409

Mita, Mario
New Relationships for Equilibrium Shaped Bays, 2050

Mitch, Derek
Characterization of Splitting Behavior of Bamboo Culms, 1479

Mitchell, Jeffrey
Tests and Analysis of Cantilevered GFRP Tubular Poles with Partial Concrete Filling, 187

Mitchell, Zane W., Ph.D.
see Lucko, Gunnar, Ph.D., 319

Mitishita, Edson Aparecido
see Centeno, Jorge Antonio Silva, 1781

Mitra, Gopal
Condition Assessment of Corrosion-Distressed Reinforced Concrete Buildings Using Fuzzy Logic, 1552

Mitropoulos, Panagiotis
Analysis of Residential Framing Accidents, Activities, and Task Demands, 341
Critical Concerns of Production Control System on Projects with Labor Constraints: Lessons from a Residential Case Study, 1332

Mittal, Atul K.
Development of a Kinetic Model for the Biosorption of Cationic Dyes by Dead Macrofungi, 667
see Singh, Mamata R., 1171

Mittal, Atul Kumar
see Maurya, Nityanand Singh, 2098

Miura, Satoru
see Imai, Michio, 1706

Miya, Akiko
see Hashimoto, Toshikazu, 711

Miyamoto, H. Kit, SE
see Gilani, Amir S. J., SE, 82

Mizumura, Kazumasa
Boundary Condition of Groundwater Flow through Sloping Seepage Face, 1129

Mlilo, T. B.
Arsenic and Fluoride Removal Using Simple Materials, 655

Mniszewski, Kim R.
see Pape, Ronald, 2143
see Pape, Ronald, 2144
see Pape, Ronald, 2145

Moavenzadeh, Fred
see Anastasopoulos, Panagiotis Ch., 1196

Moayyedi, M. K.
see Taeibi-Rahni, M., 43

Mobasher, Barzin
see Laungrungrong, Busaba, 1348
see Moradi-Marani, Farid, 1525
see Travis, Quentin B., 1423

Modarres, Reza
Frequency Distribution of Extreme Hydrologic Drought of Southeastern Semiarid Region, Iran, 1083
Low Flow Scaling with Respect to Drainage Area and Precipitation in Northern Iran, 1077

Modena, C.
see Pipinato, A., 2141

Modena, Claudio
see da Porto, Francesca, 1742
see Pellegrino, Carlo, 245

Modica, C.
see Campisano, A., 1973

Modica, Carlo
see Creaco, Enrico, 511

Modin, Oskar
Aerobic Methane Oxidation Coupled to Denitrification: Kinetics and Effect of Oxygen Supply, 632

Moerz, Tobias, Ph.D.
see Schlue, Benjamin Friedrich, Ph.D., 913

Mofidi, Amir
see Galal, Khaled, 1497

Moghaddasi, Mahnosh
Long-Term Operation of Irrigation Dams Considering Variable Demands: Case Study of Zayandeh-rud Reservoir, Iran, 1234

Mohamad-Kasim, Mohamad-Roslan
see Arabkhedri, Mahmood, 1071

Mohamed, Hamdy M.
Axial Load Capacity of Concrete-Filled FRP Tube Columns: Experimental versus Theoretical Predictions, 199

Mohamed, Hassan I.
Flow over Gabion Weirs, 1265

Mohamed, Hoda F.
see Dawod, Gomaa M., 1770

Mohammad, Louay N.
see Elseifi, Mostafa A., 1490
see Nazzal, Munir D., 33
see Nazzal, Munir D., 1422
see Tao, Mingjiang, 1813

Mohammadi, S.
see Knappett, J. A., 928

Mohammadian, Abolfazl Kouros
see Samimi, Amir, 1940

Mohammadzadeh-Habili, Jahanshir
New Empirical Method for Prediction of Sediment Distribution in Reservoirs, 1137

Mohan, S.
Optimal Water Distribution Network Design with Honey-Bee Mating Optimization, 273

Mohapatra, Pranab K.
Rating Curves for Dam-Break Flows, 1061

Mohareb, Magdi, Ph.D.
see Nowzartash, Farhood, 559

Mohaymany, Afshin Shariat
Multimodal Feeder Network Design Problem: Ant Colony Optimization Approach, 1824

Mohebbi, Mehri, MSc.
Simplest Way to Reach the Most Complicated Goal: "In the Urban Planning, Questions Are Ours and Answers Are the Natives's", 1934

Mohebbi, Zahra, Ph.D.
see Mohebbi, Mehri, MSc., 1934

Mohrlok, Ulf
Transport Characteristics in a 3D Groundwater Circulation Flow Field by Experimental and Numerical Investigations, 2115

Mohsenian, Hassan
see Mazloumi, Ehsan, 1924

Moitinho de Almeida, J. P., Ph.D.
see Santos, H. A. F. A., Ph.D., 604

Mojahedi, S. Ali
see Karamouz, Mohammad, 1209

Mok, C. K.
see Glendinning, S., 659

Mokallaf, Ebrahim
see Mashahir, Mohammad B., 962

Mola, Franco
see Giussani, Francesca, Ph.D., 1633

Molchan, G.
see Davis, C., P.E., 2095

Molenaar, A. A. A.
Effects of Aging on the Mechanical Characteristics of Bituminous Binders in PAC, 1429

Molenaar, Andre
see Liu, Gang, 1431

Molenaar, Keith R.
see Apipattanavis, Somkiat, 429
see Koch, James E., Ph.D., P.E., 2272

Molleti, Suda, Ph.D.
Effect of Fastener-Deck Strength on the Wind-Uplift Performance of Mechanically Attached Roofing Assemblies, 2131

Mollon, Guilhem
Face Stability Analysis of Circular Tunnels Driven by a Pressurized Shield, 794

Moltz, Heidi L. N.
Hydrologic-Economic Analysis of Best Management Practices for Sediment Control in the Santa Fe Watershed, New Mexico, 1088

Moncayo, Hever
Identification and Monitoring of Modal Parameters in Aircraft Structures Using the Natural Excitation Technique (NExT) Combined with the Eigensystem Realization Algorithm (ERA), 49

Mondal, Arpita
Multiobjective Groundwater Remediation System Design Using Coupled Finite-Element Model and Nondominated Sorting Genetic Algorithm II, 1091

Mondal, T. K.
see Mukherjee, I., 622

Monkman, Sean
Carbonation Curing of Slag-Cement Concrete for Binding CO_2 and Improving Performance, 1373

Montalto, Franco
see Alfredo, Katherine, 1100

Montgomery, Douglas
see Laungrungrong, Busaba, 1348

Monti, Giorgio
Genetic-Algorithm-Based Strategies for Dynamic Identification of Nonlinear Systems with Noise-Corrupted Response, 278
see Bianco, Vincenzo, 180

Moodie, Douglas R.
see Yang, Zhongzhen, 1883

Moon, Deok Hyun
see Chrysochoou, Maria, 823

Moon, F. L.
see Minaie, E., 1715

Moon, Hee Sun
Distribution of the Microbial Community Structure in Sulfur-Based Autotrophic Denitrification Columns, 666

Moon, Sungwoo
Effective Monitoring of the Concrete Pouring Operation in an RFID-Based Environment, 272

Mooney, Michael A.
see Facas, Norman W., 25
see Facas, Norman W., 546

Moore, I. D.
see Cholewa, J. A., 1570

Moore, Ian D.
see Ampiah, Nancy, 1492

Mora, Paolo
see Casula, Giuseppe, 1782

Morabito, F. C.
see Megali, G., 1442

Morad, Norhashimah
see Ho, Yeek Chia, 752

Moradi-Marani, Farid
Investigation of Corrosion Damage and Repair System in a Concrete Jetty Structure, 1525

Moradkhani, Hamid
Long-Lead Water Supply Forecast Using Large-Scale Climate Predictors and Independent Component Analysis, 1131

Moraleda, D. A.
see Moreno, M. A., Ph.D., 1246

Moramarco, Tommaso
Accuracy of Kinematic Wave and Diffusion Wave Approximations for Flood Routing. I: Steady Analysis, 7

Formulation of the Entropy Parameter Based on Hydraulic and Geometric Characteristics of River Cross Sections, 1141

Moran, Brian
see Vernerey, Franck J., 591

Morassi, Antonino
see Dilena, Michele, Ph.D., 492
see Marcuzzi, Andrea, 1666

Morcous, George, Ph.D., P.E.
Accuracy of Ground-Penetrating Radar for Concrete Pavement Thickness Measurement, 1558

Moreira, J. F. V.
see Cabral, A. R., 702

Moreno, M. A., Ph.D.
Optimization of Underground Water Pumping, 1246

Morgan Girgis, Amgad F., Ph.D., P.E.
see Badie, Sameh S., Ph.D., P.E., 140

Morgenthal, Guido
Engineering the Tower and Main Span Construction of Stonecutters Bridge, 108

Mori, Nobuhito
see Suzuki, Takayuki, Ph.D., 2059

Moriconi, Giacomo
Monitoring System to Provide Assurance for Maintenance of Structures, 2128

Morid, Saeed
see Moghaddasi, Mahnosh, 1234

Moridpour, Sara
Effect of Surrounding Traffic Characteristics on Lane Changing Behavior, 1894
see Mazloumi, Ehsan, 1924

Morita, Tomoyuki
see Hashimoto, Toshikazu, 711

Morley, Matthew C.
Adsorption of RDX and its Nitroso Metabolites onto Activated Carbon, 2104

Moro, A.
see Megali, G., 1442

Morris, Max D.
see Vennapusa, Pavana K. R., 853

Morrison, Murray J.
Analysis of Wind-Induced Clip Loads on Standing Seam Metal Roofs, 1641
see Kopp, Gregory A., 2093

Morse, Brian
Gauging Rivers during All Seasons Using the Q2D Velocity Index Method, 963

Morse, Stephen M.
Relationship between Probability of Breakage to Maximum Principal Stresses in Window Glass, 78

Morss, Rebecca E.
Interactions among Flood Predictions, Decisions, and Outcomes: Synthesis of Three Cases, 2086

Mortara, G.
Simple Model for the Cyclic Behavior of Smooth Sand-Steel Interfaces, 874

Mortazavi, I.
see Fabrie, P., 944

Mosé, R.
see Kesserwani, G., 1010

Mosé, Robert
see Ghostine, Rabih, 992
see Ghostine, Rabih, 1024

Moselhi, Osama, P.Eng.
see Fahmy, Mohamed, P.Eng., 1519
see Khan, Zafar, 1512

Moser, Gabriele
see Forzieri, Giovanni, 1032

Mostafavi, Ali
Selecting Appropriate Project Delivery System: Fuzzy Approach with Risk Analysis, 407

Mostofinejad, Davood
Grooving as Alternative Method of Surface Preparation to Postpone Debonding of FRP Laminates in Concrete Beams, 255

Mota, M.
see Minaie, E., 1715

Motahari, Ardavan, Ph.D.
Structural Deformation Characteristics of Installed HDPE Circular Pipelines, 1821

Motamed, Ramin
Shaking Table Model Tests on Pile Groups behind Quay Walls Subjected to Lateral Spreading, 820

Motamedi, Artemis
Estimation of Friction Factor in Open Channels, 1082
Evaluation of a Novel Approach to Determine the Critical Shields Stress, 1145

Motavalli, Masoud
see Czaderski, Christoph, 222

Motsamai, Oboetswe S., Ph.D.
Opportunities for Efficient and Environmentally Friendly Energy Systems: BMC Case Study in Lobatse, Botswana, 453

Mott, Richard
Distribution Factors for Short-Haul Vehicular Loads on Prestressed Concrete Open Box Beam (U-Beam) Bridges, 2140

Motta, Davide
Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago, 717

Mottram, J. T.
Prediction of Net-Tension Strength for Multirow Bolted Connections of Pultruded Material Using the Hart-Smith Semiempirical Modeling Approach, 186

Mounce, S. R.
Development and Verification of an Online Artificial Intelligence System for Detection of Bursts and Other Abnormal Flows, 1990

Mousavi, Sayed-Farhad
see Shetab-Boushehri, Sayed-Nader, 1210

Moussourakis, John
Project Compression with Nonlinear Cost Functions, 340

Mouton, Julia
Laboratory-Scale Flotation Process for Treatment of Soils Contaminated with Both PAH and Lead, 728

Mrawira, Donath, P.E.
see Khan, Ashfaq, Ph.D., 1358

Mroueh, Hussein
see Sadek, Marwan, 1797

Mtenga, Primus, P.E.
see Sobanjo, John, P.E., 158
see Tawfiq, Kamal, Ph.D., P.E., 1412

Muench, Stephen T., P.E.
Pavement Interactive: Pavement Knowledge Transfer with Web 2.0, 1914

Muhunthan, Balasingam, Ph.D, P.E., ed.
see Fratta, Dante O., Ph.D, P.E., ed., 2247

Mukherjee, Amlan
see Jin, Yongliang, 1559

Mukherjee, I.
Observation on Particulate Matter over a Period of 3 Years at Kaikhali (22.022°N and 88.614°E) inside a Special Mangrove Ecosystem: Sundarbans, 622

Mukhopadhyay, Anal K.
see Ye, Dan, 1418

Mullen, Robert L., P.E.
see Zalewski, Bart F., 529

Mullins, Gray
see Suh, Kwangsuk, 215

Mundaca, Fernando
see González, Vicente, 426

Munier, S.
Closed-Form Expression of the Response Time of an Open Channel, 1274

Muñoz, Jose F.
Effects of Coarse Aggregate Coatings on Concrete Performance, 1350
see Battaglia, Irene K., 1380

Murakami, Takao
see Hashimoto, Toshikazu, 711

Mure, Masahito
see Imai, Michio, 1706

Murff, James Donald, Ph.D., P.E.
see Yang, Ming, Ph.D., 908

Murphy, Rebecca R.
Comparison of Spatial Interpolation Methods for Water Quality Evaluation in the Chesapeake Bay, 627

Murray, Kyle E.
see Geza, Mengistu, 715

Murray, Regan
see Hart, William E., 2021

Murray, Thomas M.
see Harris, Devin K., 159

Murty, C. V. R.
see Goswami, Rupen, 461

Murugesan, S.
Studies on the Behavior of Single and Group of Geosynthetic Encased Stone Columns, 786

Mustapha, S.
see El-Harbawi, Mohanad, 2106

Muste, Marian
Near-Transducer Errors in ADCP Measurements: Experimental Findings, 971

Muthusamy, Khairunisa
see Hussin, Mohd Warid, 1372

Mwale, Davison
Integrating Wavelet Empirical Orthogonal Functions and Statistical Disaggregation for Predicting Weekly Runoff for the Upper Kafue Basin in Zambia, Africa, 1138

Myers, A. T.
Calibration of the SMCS Criterion for Ductile Fracture in Steels: Specimen Size Dependence and Parameter Assessment, 598

Myers, John J.
see Baur, Stuart W., 83

Mylona, Varvara
see Papadimitriou, Eleonora, 1884

Naaman, Antoine E.
see Park, Philip, 118

Nadal, Norberto C.
Building Damage due to Riverine and Coastal Floods, 1992

Nadim, Farrokh
see Li, Zhihong, 933

Naess, A.
Prediction of Extreme Response Statistics of Narrow-Band Random Vibrations, 488
see Saha, Nilanjan, 605

Nafi, Amir
Scheduling Renewal of Water Pipes While Considering Adjacency of Infrastructure Works and Economies of Scale, 2011

Nagae, Takuya
see Chung, Yu-Lin, 1670

Nagarajaiah, Satish
see Basu, Biswajit, 573

Naik, Tarun R.
see Moriconi, Giacomo, 2128

Nair, Syam
see Little, Dallas N., P.E., 784

Naito, Clay
Forensic Examination of a Noncomposite Adjacent Precast Prestressed Concrete Box Beam Bridge, 133

Najafabadi, Elham Fazel
see Afzalimehr, Hossein, 1080

Najafi, Mohammad
see Ma, Baosong, 1572
see Pineda-Porras, Omar, Ph.D., 1563

Najjar, Shadi S.
Effect of Sand Columns on the Undrained Load Response of Soft Clays, 898
see Sadek, Salah, 821

Najjaran, Homayoun
see Liu, Zheng, 288

Nakajima, Fumiyuki
see Modin, Oskar, 632

Nakano, Ryouji
see Imai, Michio, 1706

Nakashima, Masayoshi
see Chung, Yu-Lin, 1670

Nakat, Ziad
see Madanat, Samer, 1193

Nakata, Narutoshi
Sensitivity-Based External Calibration of Multiaxial Loading System, 478

Nakata, Yukio
see Ham, Tae-Gew, 842
see Ham, Tae-Gew, 926

Nakhla, George
see Chowdhury, Nabin, Ph.D., 713

Nalcaci, O. O.
Metal Contamination Characteristics of *Lepidium sativum* in a Phosphate-, Saline-, and Nitrate-Contaminated Media, 751

Nalinakumari, Brijesh
Effects of Primary Substrate Concentration on NDMA Transport during Simulated Aquifer Recharge, 652

Nam, Boo Hyun
see Chen, Dar-Hao, Ph.D., P.E., 1535

Nam, Jungman
see Lade, Poul V., 822

Nam, Kyoungphile
see Moon, Hee Sun, 666

Nam, Moon S.
Relationship between Texas Cone Penetrometer Tests and Axial Resistances of Drilled Shafts Socketed in Clay Shale and Limestone, 888

Nam, Pham Thanh
Model of Nearshore Waves and Wave-Induced Currents around a Detached Breakwater, 2044

Nanda, Bijoy Kumar
see Singh, Bhagat, 550

Nanni, Antonio
see Ferraro, Rossella M., 1464

Narasimhan, S.
see Hazra, B., 545

Narbaitz, Roberto M.
see Dang, Huyen T., 740

Nardone, Fabio, Ph.D.
Comparative Analysis on the Seismic Behavior of Combined RC-Masonry Buildings, 1752

Narkiewicz, J.
see Zugaj, M., 75

Nasarre-Aznar, Sergio
Eurohypothec: Drafting a Common Mortgage for Europe, 1298

Naseri, AbdAli
see Albaji, Mohammad, 1213

Nash, David H.
see Abid, Muhammad, 607

Nasirai, Cyrus
see Rezaiee-Pajand, M., 606

Nason, Jeffrey A.
Modeling Particle-Size Distribution Dynamics during Precipitative Softening, 610

Nasr, Elhami
see Shehab, Tariq, 1574

Nassar, Khaled
Queuing Model for Assessing the Efficiency of Building Corridors, 76

Nasser, Houssein
see Basseville, Michèle, 495

Nassirharand, Amir
Nonlinear Controller Synthesis for Single-Input Multiple-Output Systems with Application to Cruise Missile, 50

Nassr, Amr A.
see El-Dakhakhni, Wael W., 502

Nataatmadja, A., Ph.D.
see Vardanega, P. J., 1391

Natale, L.
see Petaccia, G., 970

Natarajan, C.
Rehabilitation and Preservation of the St. Lourdes Church, Tiruchirappalli, 1524
see Chen, Shen-En, Ph.D.; P.E., ed., 2260

Natarajan, Poornima
Thermal Reduction by an Underground Storm-Water Detention System, 671

Nath, Tushar K.
see Dey, Subhasish, 544

Nayak, P. C.
Explaining Internal Behavior in a Fuzzy If-Then Rule-Based Flood-Forecasting Model, 1057

Nayal, Rim, Ph.D.
Parametric Study of Posttensioned Inverted-T Bridge System for Improved Durability and Increased Span-to-Depth Ratio, 164

Nazarian, Soheil, Ph.D., P.E.
see Madhyannapu, Raja Sekhar, Ph.D., 785
see Mahmoud, Enad, 1341

Nazzal, Munir D.
Estimation of Resilient Modulus of Subgrade Soils for Design of Pavement Structures, 1422
Implementation of a Critical State Two-Surface Model to Evaluate the Response of Geosynthetic Reinforced Pavements, 33
see Tao, Mingjiang, 1813

Ndiba, Peter K.
Risk Assessment of Metal Leaching into Groundwater from Phosphate and Thermal Treated Sediments, 660

Neale, K. W.
see Ferrier, E., 197
see Godat, A., 202

Nédélec, Yves, Ph.D.
Discharge Formulas for Subsurface Drainage of Retention Pond, 1223

Neely, William J., Ph.D., P.E.
see Stuedlein, Armin W., Ph.D., P.E., 851

Neff, Gina
see Dossick, Carrie S., P.E., 360

Negrão, João Henrique Jorge de Oliveira
Glued Composite Timber-Concrete Beams. I: Interlayer Connection Specimen Tests, 1729
Glued Composite Timber-Concrete Beams. II: Analysis and Tests of Beam Specimens, 1730

Negulescu, Ioan
see Elseifi, Mostafa A., 1490

Negulescu, Ioan I.
see Gutierrez-Wing, Maria T., 693

Neithalath, Narayanan
see Deo, Omkar, 1424

Nelson, Jonathan
see McDonald, Richard, 1054

Nema, Arvind K.
see Ahluwalia, Poonam Khanijo, 2114

Nepf, Heidi M.
see Rominger, Jeffrey T., 1047

Nessen, Beatrice, B.A., M.B.A
see Heikin, Steven A., A.I.A, 2067

Neumann, Norman F.
see He, Jianxun, 745

Neupauer, Roseanna M., Ph.D., P.E.
Backward Probabilistic Modeling to Identify Contaminant Sources in Water Distribution Systems, 2018
Classroom Activities to Illustrate Concepts of Darcy's Law and Hydraulic Conductivity, 1583

Newcombe, Caroline E.
Improved Passive Treatment of Acid Mine Drainage in Mushroom Compost Amended with Crab-Shell Chitin, 683

Newcombe, Gayle
see Ho, Lionel, 718

Newcombe, Michael P.
In-Plane Experimental Testing of Timber-Concrete Composite Floor Diaphragms, 1750

Newman, John Kent, Ph.D.
see Priddy, Lucy Phillips, P.E., 1367

Newman, Kent, Ph.D.
see Rushing, John F., 1472

Newman, M. P.
Numerical Modeling of Geofoam Embankments, 802

Ng, A. W. M.
see Tran, D. H., 275
see Tran, H. D., 1180

Ng, Fungfai
see Ding, Zhikun, 337

Ng, Kelvin T. W.
Effects of Design Mix and Porosity of Waste-Derived Paste as Landfill Daily Covers on Lead Retardation, 2116

Ng, Man Yin Albert
see Joshi, Kaushal, 829

Ngeh, Lawrence N.
see Bigger, Stephen W., 750

Nghiem, Long Duc
see Indraratna, Buddhima, 862

Nguyen, Belinda
see Ossenbruggen, Paul J., 1836

Nguyen, Hieu H.
Directional Effects of Shear Combined with Compression on Bridge Elastomeric Bearings, 101

Nguyen, Long D.
Case Law and Variations in Cumulative Impact Productivity Claims, 397
Analysis of Adverse Weather for Excusable Delays, 439

Nguyen, Nghi T., D.Sc.
see Badie, Sameh S., Ph.D., P.E., 140

Nguyen, Quang-Truong
see Jan, Chyan-Deng, 1264

Nguyen, Tang-Hung
see Shehab, Tariq, 1574

Ni, James C.
Monitoring and Modeling Grout Efficiency of Lifting Structure in Soft Clay, 35

Ni, Y. Q.
Monitoring-Based Fatigue Reliability Assessment of Steel Bridges: Analytical Model and Application, 1759

Nian, Weimin
Response of an Elastic Structure Subject to Air Shock Considering Fluid-Structure Interaction, 59

Nichita, Tudor
see Mitropoulos, Panagiotis, Ph.D., P.E., 1332

Nichols, Mary, Ph.D.
see Stewart, Dave, 1074

Nicklow, John
State of the Art for Genetic Algorithms and Beyond in Water Resources Planning and Management, 2001

Nicolaides, Demetris
see Farhat, Farhat A., 1342

Nicot, François
see Wan, Richard, 518

Nie, Jianguo
see Fan, Jiansheng, 1691

Nie, Xin
see Fan, Jiansheng, 1692

Nielsen, Jens Henrik, Ph.D.
Characterization of the Residual Stress State in Commercially Fully Toughened Glass, 1359

Nielsen, Nikolaj
When the Cold Wind Blows: Legal Strategies against Ghettoization in Denmark, 1297

Nielsen, So/ren R. K.
see Zhou, Qiang, 599

Niemann, Jeffrey D., P.E.
see Gironás, Jorge, 1055

Niemitz, Carl W.
Experimental Behavior of Carbon Fiber-Reinforced Polymer (CFRP) Sheets Attached to Concrete Surfaces Using CFRP Anchors, 194

Niemunis, A.
see Wichtmann, T., 845

Nieto, Leopoldo M.
Industrial Plant for Olive Mill Wastewater from Two-Phase Treatment by Chemical Oxidation, 757

Nikolova, Gergana
see Ivanova, Jordanka, 579

Nilsson, Kenneth A.
General Model to Represent Multiple Wetland and Lake Stage-Storage Behavior, 1134

Nimbalkar, Sanjay
see Indraratna, Buddhima, 863

Nimmer, Mike
Modeling Water Table Mounding and Contaminant Transport beneath Storm-Water Infiltration Basins, 1152

Ning, Ping
Catalytic Decomposition of CFC-12 over Solid Super Acid Mo_2O_3/ZrO_2, 770

Nio, Alfrendo Satyanaga
see Rahardjo, Harianto, 924

Nishikawa, Tracy
see Chiu, Yung-Chia, 1989

Niu, Tiecheng
see Lee, George C., 1658

Nixon, Jeffery M.
see Wade, Samuel A., 1363

Noman, Ahmed S.
see Bagchi, Ashutosh, 1510

Nordin, Curtis
Combined Effect of Loading and Cold Temperature on the Stiffness of Glass Fiber Composites, 198

Norville, H. Scott, P.E.
see Morse, Stephen M., 78

Nossoni, Goli
Improved Repair of Concrete Structures Using Polymer Concrete Patch and FRP Overlay, 1375

Noto, Leonardo V.
see Liuzzo, Lorena, Ph.D., 1068

Nourbakhsh, Ahmad
see Riasi, Alireza, 1039

Nova, Roberto
see Castellanza, Riccardo, 835

Nowzartash, Farhood
Upper Bound Plastic Interaction Relations for Elliptical Hollow Sections, 559

Noyce, David A., Ph.D., P.E.
see Chen, Yali, Ph.D., 1816

Nwogu, Okey
Infragravity Wave Motions and Runup over Shallow Fringing Reefs, 2056

O'Bannon, Deborah J., Ph.D., P.E.
Successful Leadership Development for Women STEM Faculty, 2075

Obeysekera, Jayantha, P.E.
see Park, Joseph, P.E., 2061

OBrien, Eugene J.
Importance of the Tail in Truck Weight Modeling for Bridge Assessment, 114

O'Brien, John
see Chinowsky, Paul S., 359

Ocel, Justin
see Chin, Joannie, 1460

Ochoa, Carlos G.
see Fernald, Alexander G., 1289

Ocker, Colin, P.E.
see Colwell, Arthur B., P.E., 2195

O'Connell, Robert M., P.E.
Capsule Separation by Linear Induction Motor in Pneumatic Capsule Pipeline Freight Transport System, 1571

O'Connor, Ben L.
Predictive Modeling of Transient Storage and Nutrient Uptake: Implications for Stream Restoration, 1049

O'Connor, Thomas P.
Explanation for Anomalous Readings during Monitoring of a Best Management Practice, 1258
see Selvakumar, Ariamalar, 623

Odusami, K. T.
see Ameh, O. J., 1582

Oehlers, Deric John
see Haskett, Matthew, 219

Oesterle, Ralph G.
see Li, Lungui, 125
see Li, Lungui, Ph.D., 143

Oettle, Nicolas K.
see Hanson, James L., Ph.D., P.E., 704

Ofori, George
see Lim, Jay Na, 371
see Toor, Shamas-ur-Rehman, Ph.D., 348

Oh, HyungSeon
Estimation of a Sensitivity-Based Metric for Detecting Market Power, 450

Oh, Jeong Hee
see Kopp, Gregory A., 1615

Ojha, C. S. P.
see Gupta, Umesh P., 1008
see Prasad, K. S. Hari, 1283

Okasha, Nader M.
Advanced Modeling for Efficient Computation of Life-Cycle Performance Prediction and Service-Life Estimation of Bridges, 312
Novel Approach for Multicriteria Optimization of Life-Cycle Preventive and Essential Maintenance of Deteriorating Structures, 1707

Okazaki, Taichiro
see Berman, Jeffrey W., 1662

O'Keefe, K.
see Lichti, D. D., 1779

Okwadha, George D. O.
see Dombrowski, Frank J., CHMM, 716

Olesen, John Forbes
see Nielsen, Jens Henrik, Ph.D., 1359

Oliveira, D. A. F.
Comparison between Models of Rock Discontinuity Strength and Deformation, 858

Oliveira, Daniel V., Ph.D.
Experimental Behavior of FRP Strengthened Masonry Arches, 207

Oliveira, Henrique Magnani
Embankments over Soft Clay Deposits: Contribution of Basal Reinforcement and Surface Sand Layer to Stability, 799

Oliveira, José R. M. S.
Physical Modeling of Lateral Clay-Pipe Interaction, 867

Oliveira, Paulo J. Venda
Behavior of an Atypical Embankment on Soft Soil: Field Observations and Numerical Simulation, 778

Oloufa, Amr
see Serag, Engy, Ph.D., 415

O'Loughlin, C. D.
Nonlinear Cone Penetration Test-Based Method for Predicting Footing Settlements on Sand, 813

Olsen, Beatrice A.
see Singh, Purnendu N., 1232

Olsen, Michael J.
Terrestrial Laser Scanning-Based Structural Damage Assessment, 285

Olson, Scott M., Ph.D., P.E.
see Sadrekarimi, Abouzar, Ph.D., 809
see Seo, Min-Woo, Ph.D., 838

Omerovic, Sanida
Methodology for Written and Oral Presentation of Research Results, 1593

Oñate, Eugenio
see Carbonell, Josep Maria, 504

Onda, Kensuke
see Hashimoto, Toshikazu, 711

Ong, G. P.
Modeling Skid Resistance of Commercial Trucks on Highways, 1842

Ong, K. C. G.
see Wang, Zengrong, 460

Oo, Bee-Lan
Modeling the Heterogeneity in Contractors' Mark-Up Behavior, 386

Ooi, Phillip S. K., P.E.
Field Behavior of an Integral Abutment Bridge Supported on Drilled Shafts, 95
Numerical Study of an Integral Abutment Bridge Supported on Drilled Shafts, 96

Oommen, Thomas
Model Development and Validation for Intelligent Data Collection for Lateral Spread Displacements, 304
Validation and Application of Empirical Liquefaction Models, 931

Opdahl, Arie
see Chinowsky, Paul S., 1181

Orabi, Wallied
Optimizing Resource Utilization during the Recovery of Civil Infrastructure Systems, 1339

Oravec, Heather
see Zeng, Xiangwu, 51

Orbell, John D.
see Bigger, Stephen W., 750

Orcesi, André D.
Inclusion of Crawl Tests and Long-Term Health Monitoring in Bridge Serviceability Analysis, 124

Ordaz, Mario
see Pineda-Porras, Omar, 1579

Orense, Rolando
see Ham, Tae-Gew, 842

Orense, Rolando P.
see Ham, Tae-Gew, 926

Orfeo, Oscar
see Simmons, Stephen M., 945

Orlandi, Gianmarco
see Castellanza, Riccardo, 835

O'Rourke, Michael, Ph.D., P.E.
Snow Loads: Guide to the Snow Load Provisions of ASCE7-10, 2278

O'Rourke, Michael J.
Eave Ice Dams, 77

O'Rourke, T. D.
see Bonneau, A., 1190

O'Rourke, Thomas D.
see Mason, James A., 1561
see Mason, James A., 1578

Ortega, Guillermo
see Pantaleón, Marcos J., 156

Orvis, Sierra
see Burt, Charles M., 1252

Osborn, Lynn, ed.
Trenchless Renewal of Culverts and Storm Sewers, 2291

Osborne, Jason A.
see McNett, Jacquelyn K., 673

Osman, Ashraf S.
Comparison between Coupled and Uncoupled Consolidation Analysis of a Rigid Sphere in a Porous Elastic Infinite Space, 564

Osouli, Abdolreza
Interplay between Field Measurements and Soil Behavior for Capturing Supported Excavation Response, 781

Ossa, E. A.
Triaxial Deformation Behavior of Bituminous Mixes, 1353

Ossenbruggen, Paul J.
Detecting Unsafe Roadways with Spatial Statistics: Point Patterns and Geostatistical Models, 1836

Ossman, George
Consistency and Reliability of Construction Arbitration Decisions: Empirical Study, 1323

Ostbo, Bruce I., P.E., S.E., ed.
see Ward , Thomas, P.E., S.E., ed., 2270

Ostfeld, Avi
see Nicklow, John, 2001
see Perelman, Lina, 1966

Osvaldo, Facini
see Francesca, Ventura, 1208

Oswald, Michelle R.
Rating Sustainability: Transportation Investments in Urban Corridors as a Case Study, 1937

Othman, Ayman M.
Effect of Low-Density Polyethylene on Fracture Toughness of Asphalt Concrete Mixtures, 1457
Impact of Polypropylene Application Method on Long-Term Aging of Polypropylene-Modified HMA, 1456

Ottmar, Karl J., P.E.
Sorption of Statin Pharmaceuticals to Wastewater-Treatment Biosolids, Terrestrial Soils, and Freshwater Sediment, 638

Ou, Yu-Chen
Large-Scale Experimental Study of Precast Segmental Unbonded Posttensioned Concrete Bridge Columns for Seismic Regions, 1632
see Lee, George C., 1658

Ouvry, Jean-François
see Nédélec, Yves, Ph.D., 1223

Ovez, B.
see Nalcaci, O. O., 751

Ovtchinnikov, Serguei
see Bielefeldt, Angela, 695

Oweis, Theib
see Benli, Bogachan, 1282

Owen. Robert
see Sacks, Rafael, 411

Owens, Clayton R.
see Bayraktar, Mehmet Emre, 85

Oya, Yoshihiro
see Plata, Hermelinda, 699

Ozbek, Mehmet Egemen
Data and Modeling Issues Faced during the Efficiency Measurement of Road Maintenance Using Data Envelopment Analysis, 1164
Efficiency Measurement of Bridge Maintenance Using Data Envelopment Analysis, 1165

Ozcelik, O.
see Luco, J. E., 1656

Ozcevik, Ozlem, Ph.D.
Building Capacity through Collaborative Local Action: Case of Matra REGIMA within Zeytinburnu Regeneration Scheme, 1936

Ozgen, S.
see Nalcaci, O. O., 751

Ozorhon, Beliz
Performance of International Joint Ventures in Construction, 1336

Pack, Chelisa A.
see Lee, Joong Gwang, 1983

Paczos, P.
see Magnucki, K., 1695

Padgett, Jamie E.
see Ghosh, Jayadipta, 1753

Pagán, Ismael
see Nadal, Norberto C., 1992

Pagano, Thomas C.
see Abudu, Shalamu, 1116

Page, Adrian W., Ph.D.
see Bosiljkov, Vlatko, Ph.D., 1665

Paggi, M.
see Carpinteri, A., 479

Pagliara, Stefano
Influence of Tailwater Depth and Pile Position on Scour Downstream of Block Ramps, 1212
Self-Aeration and Friction over Rock Chutes in Uniform Flow Conditions, 1044

Pahlow, Markus, Ph.D.
see Klein, Bastian, Ph.D., 1092

Paik, Joongcheol
Coherent Structure Dynamics in Turbulent Flows Past In-Stream Structures: Some Insights Gained via Numerical Simulation, 1046

Palau-Salvador, Guillermo
see Martí, Pau, 1200
see Martí, Pau, 1218

Palermo, Michele
see Pagliara, Stefano, 1212

Palhegyi, Gary E., P.E., D.WRE
Designing Storm-Water Controls to Promote Sustainable Ecosystems: Science and Application, 1106
Modeling and Sizing Bioretention Using Flow Duration Control, 1097

Pallasch, Brian
see Dickert, Allison, 2183

Palmer, M. C., P.E.
see Bonneau, A., 1190

Palmer, Richard N., Ph.D., P.E., D.WRE, ed.
World Environmental and Water Resources Congress 2010: Challenges of Change, 2296
see Polebitski, Austin S., 1961

Palumbo, James E.
Modeling the Oxidation of Sulfide in Pulp and Paper Wastewaters, 741

Pampanin, Stefano
see Akguzel, Umut, 185

see Newcombe, Michael P., 1750

Pan, Deng
see Zhou, Guangchun, 296

Pan, Feifei
Inverse Method for Estimating the Spatial Variability of Soil Particle Size Distribution from Observed Soil Moisture, 1149

Pan, Hejia
see Xin, Ming, 67

Pan, Huang-Hsing
Study on Strain-Rate Sensitivity of Cementitious Composites, 566

Pan, Y.
Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. I: Bridge Modeling, Parametric Analysis, and Retrofit Design, 137
Seismic Fragility of Multispan Simply Supported Steel Highway Bridges in New York State. II: Fragility Analysis, Fragility Curves, and Fragility Surfaces, 138

Pan, Yan-Gu
see Chen, Lu-Hsien, 1117

Panchang, Vijay G.
see Singhal, Gaurav, 2060

Panda, Sudhindra N.
see Sahoo, Bharat C., 1111

Pandey, M. D.
see Hazra, B., 545

Pandey, Ramesh
Hygrothermoelastic Postbuckling Response of Laminated Composite Plates, 39

Pandit, Arka
see Ergas, Sarina J., P.E., 733

Pandit, Mihir K.
Stochastic Free Vibration Response of Soft Core Sandwich Plates Using an Improved Higher-Order Zigzag Theory, 40

Pandolfo, Claudia, Ph.D. Student
see Moramarco, Tommaso, 7

Pang, Jason B. K.
Large-Bar Connection for Precast Bridge Bents in Seismic Regions, 116

Pang, Joseph, P.E.
see She, Nian, Ph.D., 1101

Pang, Ling
see Wu, Shaopeng, 1427

Pang, Peggy S. M.
see Lai, Anthony W. Y., 401

Pang, Shih-Hao, Ph.D.
see Rasdorf, William, Ph.D., P.E., 1186

Pang, Weichiang
Simplified Direct Displacement Design of Six-Story Woodframe Building and Pretest Seismic Performance Assessment, 1688
see Wang, Yue, 1704

Panigrahi, Balram
see Sahoo, Bharat C., 1111

Pannone, Marilena
Transient Hydrodynamic Dispersion in Rough Open Channels: Theoretical Analysis of Bed-Form Effects, 957

Pantaleón, Marcos J.
Dynamic Analysis of a Composite Cable-Stayed Bridge: Escaleritas Viaduct, 156

Pantazis, G.
see Lambrou, E., 1786

Pantazopoulou, S. J.
see Tastani, S. P., 1680

Pantazopoulou, Stavroula J.
see Syntzirma, Despina V., M.Sc., 1606

Pantelias, Aristeidis
Methodological Framework for Evaluation of Financial Viability of Public-Private Partnerships: Investment Risk Approach, 1188

Paola, Rossi Pisa
see Francesca, Ventura, 1208

Papadimitriou, Costas
see Sobczyk, Kazimierz, 477

Papadimitriou, Eleonora
Perceived Level of Service, Driver, and Traffic Characteristics: Piecewise Linear Model, 1884
Theoretical Framework for Modeling Pedestrians' Crossing Behavior along a Trip, 1887

Papadopoulos, P. G.
see Kiousis, Panos D., 558

Papageorgiou, Athanasios V.
Decoupling Criteria for Inelastic Irregular Primary/Secondary Structural Systems Subject to Seismic Excitation, 582

Papageorgiou, Markos
see Spiliopoulou, Anastasia D., 1796

Papamichail, Ioannis
see Spiliopoulou, Anastasia D., 1796

Pape, Ronald
Explosion Phenomena and Effects of Explosions on Structures. I: Phenomena and Effects, 2143
Explosion Phenomena and Effects of Explosions on Structures. II: Methods of Analysis (Explosion Effects), 2144
Explosion Phenomena and Effects of Explosions on Structures. III: Methods of Analysis (Explosion Damage to Structures) and Example Cases, 2145

Paragamian, Vaughn
see McDonald, Richard, 1054

Pardillo-Mayora, J. M.
see Jurado-Piña, R., 1846
see Jurado-Piña, R., 1910

Pardo, Miguel A.
see Cabrera, Enrique, 2027

Paret, Terry F.
see Hill, Howard J., 2148
see Hill, Howard J., 2149

Parfitt, M. Kevin, ed.
see Chen, Shen-en, ed., 2245

Paris, A.
Hydrological Effects of Bounding the Venice (Italy) Industrial Harbor by a Protection Cutoff Wall: Modeling Study, 1144

Paris, Angela Marcarino
see Vives, Antonio, 355

Paris, Anna
see Julien, Pierre Y., 1012

Parisi, Alessandra
see Caliendo, Ciro, 1859

Parisi, F.
see Augenti, N., 1467
see Augenti, N., 1550

Parizzi, Maria Giovana, Ph.D.
see Galvão, Terezinha Cássia de Brito, Ph.D., 2082

Park, Byung-Jung
see Fitzpatrick, Kay, P.E., 1877

Park, Cheol-Soo
see Pati, Debajyoti, 1513

Park, Heedae
see Jung, Wooyong, 444

Park, Heekyung
see Kim, Sung Hoon, 951

Park, Hong-Gun
see Choi, In-Rak, 1746
see Eom, Tae-Sung, 1711

Park, Joseph, P.E.
Climate Links and Variability of Extreme Sea-Level Events at Key West, Pensacola, and Mayport, Florida, 2061

Park, Jun-Boum
see Christ, Martin, 1449

Park, Jung-Woong
Automated Finite-Element-Based Validation of Structures Designed by the Strut-and-Tie Method, 1627

Park, Moonseo
Boost, Control, or Both of Korean Housing Market: 831 Countermeasures, 383
see Ji, Sae-Hyun, 399

Park, No-Suk
see Kim, Sung Hoon, 951

Park, Philip
Behavior of Bridge Asphalt Plug Joints under Thermal and Traffic Loads, 118

Park, Sang Il
see Kim, Bong-Geun, 290

Park, Sang-Yeol
see Park, Philip, 118

Park, Soon-Jeon
see Kim, Young-Ju, 1717

Park, Sung-Sik
Effect of Wetting on Unconfined Compressive Strength of Cemented Sands, 940

Parker, Gary
see Detert, Martin, 1022
see Sequeiros, Octavio E., 987

Parks, Jeffrey
Effects of Bulk Water Chemistry on Autogenous Healing of Concrete, 1398

Park-Said, Winifred
see Park, Joseph, P.E., 2061

Parnell, R.
Vibration Performance of Lightweight Cold-Formed Steel Floors, 1671

Parr, Michael J.
Proposed Method for Determining the Interval for Hands-on Inspection of Steel Bridges with Fracture Critical Members, 127

Parra-Montesinos, Gustavo J.
see Cheng, Min-Yuan, 1714

Parsheh, Mehran
Estimation of Power Spectra of Acoustic-Doppler Velocimetry Data Contaminated with Intermittent Spikes, 982

Parsons, Daniel R.
see Simmons, Stephen M., 945

Partouche, R.
see Sacks, R., 384

Parvin, Azadeh
CFRP Rehabilitation of Concrete Frame Joints with Inadequate Shear and Anchorage Details, 183

Pastor, Manuel
see Cascini, Leonardo, 782

Pasupuleti, Nagaswetha
see Pulugurtha, Srinivas S., Ph.D., P.E., 1886

Patel, Alpeshkumar
Integrating Global Positioning System with Laser Technology to Capture As-Built Information during Open-Cut Construction, 1580

Patel, H. M.
Simulation of Radial Collector Well in Shallow Alluvial Riverbed Aquifer Using Analytic Element Method, 1211

Patel, Ramanbhai M.
see Kumar, Harjinder, 649

Pati, Debajyoti
Facility Maintenance Performance Perspective to Target Strategic Organizational Objectives, 1513

Patil, S.
Characteristics of Monami Wave in Submerged Vegetated Flow, 1073
Horizontal Dispersion in Gyres-Internal Wave Flow Field in a Rotating Circular Lake, 1115
Linear Instability Theory for Frequency Assessment of Coherent Vortices in Submerged and Aside Rigid Canopies, 1157

Patil, Shekhar
see Apipattanavis, Somkiat, 429

Patnaikuni, Indubhushan
see Kumar, Dhirendra, 1551

Pauletti, R. M. O.
see Majorana, C. E., 93

Paulino, Olair Gonçalves
see Faria, Marco Tulio C., 1038

Paulotto, Carlo
see Gutiérrez, Eugenio, 1613

Paultre, P.
Behavior of Steel Fiber-Reinforced High-Strength Concrete Columns under Uniaxial Compression, 1728

Paultre, Patrick
see Weber, Benedikt, 1637

Pavić, Aleksandar
see Živanović, Stana, 1735

Pavlović, Ljubica M.
see Terzić, Anja M., 1439

Pawar, S. N.
see Viswanadham, B. V. S., 1392

Pawlikowski, James J., P.E.
see Baker, William F., P.E., 2170

Paz, A. R.
Large-Scale Hydrodynamic Modeling of a Complex River Network and Floodplains, 1072

Pearce, Chris
see Grassl, Peter, 491

Pearson, Chris
HTDP 3.0: Software for Coping with the Coordinate Changes Associated with Crustal Motion, 1776

Pearson, Neil
see Menassa, Carol, 352

Pecce, Marisa
see Ceroni, Francesca, 229

Pedersen, Henning
see Schmidt, Jacob W., 216

Pedit, Joseph A.
see Wright, Deona Johnson, 663

Pei, Shiling
see Pang, Weichiang, 1688
see van de Lindt, John W., 1611
see van de Lindt, John W., 1732

Peiffer, John P.
see Puckett, Jay A., Ph.D., P.E., 1726

Pellegrino, Carlo
Analytical Model for FRP Confinement of Concrete Columns with and without Internal Steel Reinforcement, 245

Pelletier, Geneviève
see Morse, Brian, 963

Peña Mora, Feniosky
see Menassa, Carol, 300
see Menassa, Carol, 352
see Menassa, Carol C., 1324

Peña-Mora, Feniosky
Mobile Ad Hoc Network-Enabled Collaboration Framework Supporting Civil Engineering Emergency Response Operations, 289

Pender, Michael J.
see Wotherspoon, Liam M., 139

Peng, Fangle
see Tan, Yong, 1504

Peng, Jianxin
see Shao, Xudong, 104

Peng, Machuan
see Xia, Meng, 725

Peng, Ruwu
see Zhang, Xin, 984

Peng, Yong-Zhen
see Wu, Chang-Yong, 749

Pensomboon, Gridsana
see Liang, Robert, 1167

Penumadu, Dayakar
see Nordin, Curtis, 198

Perea, Hugo
Nonuniform and Unsteady Solute Transport in Furrow Irrigation. I: Model Development, 1241

Pereira, Aloisio Rodrigues, Ph.D.
see Galvão, Terezinha Cássia de Brito, Ph.D., 2082

Perelman, Lina
Extreme Impact Contamination Events Sampling for Water Distribution Systems Security, 1966

Perera, B. J. C.
see Tran, D. H., 275
see Tran, H. D., 1180

Pérez Urrestarazu, L.
Irrigation Distribution Networks' Vulnerability to Climate Change, 1253

Periche, Nathalie
see Poulin, Annie, 2025

Perrault, Charles
see Bouaanani, Najib, 470

Perros, Kyriakos
see Sobczyk, Kazimierz, 477

Pessiki, Stephen
see Naito, Clay, 133

Pestana, Juan M., Sc.D., P.E.
see Choi, Jae Woong, 1790
see Dashti, Shideh, 788
see Dashti, Shideh, 864

Petaccia, G.
Simplified versus Detailed Two-Dimensional Approaches to Transient Flow Modeling in Urban Areas, 970

Peterka, Jon A.
see Vickery, Peter J., 1668

Peterman, Robert J., Ph.D., P.E.
see Nayal, Rim, Ph.D., 164

Peters, John F.
Percolation Threshold of Sand-Clay Binary Mixtures, 804

Petersen, Robert B.
In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. I: Experimental Investigation, 250

In-Plane Shear Behavior of Masonry Panels Strengthened with NSM CFRP Strips. II: Finite-Element Model, 251

Peters-Lidard, Christa D.
see Pan, Feifei, 1149

Petit, Christophe
see Allou, Fatima, 600

Petroski, Henry, P. E., Ph.D.
Great Achievements & Grand Challenges, 2164

Pettersson, Thomas J. R.
see Bondelind, Mia, 771

Pétursson, H.
see White, H., 2150

Pfister, Michael
Chute Aerators. I: Air Transport Characteristics, 980
Chute Aerators. II: Hydraulic Design, 981

Phadke, R. C.
see Shanthakumar, S., 1389

Pham, Cao Hung
Experimental Investigation of High Strength Cold-Formed C-Sections in Combined Bending and Shear, 1693

Pham, D. C.
Optimal Layout of Gill Cells for Very Large Floating Structures, 1697

Pham, Thuy Duong
Removal of Hexachlorobenzene and Phenanthrene from Clayey Soil by Surfactant- and Ultrasound-Assisted Electrokinetics, 696

Phares, Brent
see Chang, Byungik, 531

Phelan, P. E.
see Carlson, J. D., 1360

Phelps, Andreas F., Ph.D., P.E.
Ethnographic Theory-Building Research in Construction, 320

Philipp, A.
Analytical Model of Surge Flow in Nonprismatic Permeable Channels and Its Application in Arid Regions, 972

Phillips, Ryan
see Sharp, Michael K., 904

Phoon, Kok-Kwang
Probabilistic Analysis of Soil-Water Characteristic Curves, 817
see Chai, Hua-You, 892
see Ching, Jianye, 581

Pi, Yong-Lin
Nonlinear Thermoelastic Buckling of Pin-Ended Shallow Arches under Temperature Gradient, 553

Piau, Jean Michel
see Kane, Malal, 1793

Piccinin, R.
Linear Elastic Fracture Mechanics Pullout Analyses of Headed Anchors in Stressed Concrete, 533

Pichler, B.
Estimation of Influence Tensors for Eigenstressed Multiphase Elastic Media with Nonaligned Inclusion Phases of Arbitrary Ellipsoidal Shape, 562

Picken, David H.
see Blackman, Ivy Q., 430

Picó, Santiago Guillem
see Prats, Alberto García, 1280

Picón, Rafael
see Blázquez, Antonio, 589

Pierce, Michael W.
Predicting Peak Outflow from Breached Embankment Dams, 1090

Pietrucha, Martin T., Ph.D., P.E.
see Meeker, Donald T., 1818

Pigman, Jerry, P.E.
see Stamatiadis, Nikiforos, P.E., 1820

Pillai, Radhakrishna G.
Probabilistic Models for the Tensile Strength of Corroding Strands in Posttensioned Segmental Concrete Bridges, 1451

Piller, O.
see Fabrie, P., 944

Pilotti, Marco
Simplified Method for the Characterization of the Hydrograph following a Sudden Partial Dam Break, 1014

Pincheira, Jose A., Ph.D.
see Gordon, Rebecca, P.E., 157

Pineda-Porras, Omar, Ph.D.
Seismic Damage Estimation for Buried Pipelines: Challenges after Three Decades of Progress, 1563
Seismic Fragility Formulations for Segmented Buried Pipeline Systems Including the Impact of Differential Ground Subsidence, 1579

Pingel, Nathan
Multiple Flood Source Expected Annual Damage Computations, 1991

Pinter, P. J.
see French, A. N., 1225

Pipinato, A.
Structural Analysis and Fatigue Reliability Assessment of the Paderno Bridge, 2141

Piratheepan, J.
Characterization of Cementitiously Stabilized Granular Materials for Pavement Design Using Unconfined Compression and IDT Testings with Internal Displacement Measurements, 1396

Piratheepan, Jegatheesan
see Gnanendran, Carthigesu T., Ph.D., 1867

Pires da Costa, Américo
see Simões, Maria de Lurdes, 1847

Pirulli, Marina
Morphology and Substrate Control on the Dynamics of Flowlike Landslides, 810

Plagianakos, Theofanis S.
see Wever, Thomas E., 1649

Plank, Roger J.
see Yu, Chaoming, Ph.D., 1634

Plans, Albert P.
see Peña-Mora, Feniosky, 289

Plata, Hermelinda
Speciation and Mobility Assessment of Zinc in Coastal Landfill Sites with MSW Incinerator Ash, 699

Platten, David, P.E.
see Aniol, R. John, P.E., 2160

Plesek, Jiri
Convexity of Yield Surface with Directional Distortional Hardening Rules, 507

Ploeger, Hendrik D.
see Groetelaers, Danielle A., 1300

Plum, Robin
see Huawen, Ye, 237

Plumb, C.
see Davis, C., P.E., 2095

Pocwiardowski, Pawel
see Simmons, Stephen M., 945

Pody, Robert D.
see Zhang, Zhenxing, 1081

Pohlman, Alex
see Viswanathan, Shekar, 684

Pokharel, N.
see Rajaratnam, N., 1042

Polat, Gul
see Arditi, David, 1599

Polebitski, Austin S.
Seasonal Residential Water Demand Forecasting for Census Tracts, 1961

Pollard, A.
see Rowe, R. Kerry, 703

Pollino, Michael
Bidirectional Seismic Behavior of Controlled Rocking Four-Legged Bridge Steel Truss Piers, 1754
Seismic Testing of a Bridge Steel Truss Pier Designed for Controlled Rocking, 1755

Ponce, Juli
Affordable Housing and Social Mix: Comparative Approach, 1296

Ponnapalli, P. Sarat
see Al-Ostaz, Ahmed, 1354

Poon, C. W.
see Chang, C. C., 486

Poon, Wai Keat
see Voo, Yen Lei, 1743

Popova, Elmira
see Wang, Feng, 1860

Porey, P. D.
see Ghare, A. D., 446

Porté-Agel, Fernando
see Chamorro, Leonardo P., 976
see Parsheh, Mehran, 982

Porzilli, Dante V.
see Chin, David A., 2000

Postacchini, Matteo
see Lorenzoni, Carlo, 2036

Potter, Kenneth W., Ph.D.
Watershed Management 2010: Innovations in Watershed Management Under Land Use and Climate Change, 2293

Poulin, Annie
Planning Unidirectional Flushing Operations as a Response to Drinking Water Distribution System Contamination, 2025

Powell, Anne Elizabeth
Special Report: The Infrastructure Roundtables: Seeking Solutions to an American Crisis, 2173
Special Report: The Infrastructure Roundtables: Increase Federal Leadership in Infrastructure, 2174
Special Report: The Infrastructure Roundtables: Promote Sustainability and Resilience, 2175
Special Report: The Infrastructure Roundtables: Develop Federal, Regional, and State Infrastructure Plans, 2176
Special Report: The Infrastructure Roundtables: Address Life-Cycle Costs and Ongoing Maintenance, 2177
Special Report: The Infrastructure Roundtables: Increase Infrastructure Investment at All Levels of Government, 2178
Special Report: The Infrastructure Roundtables: Concluding Thoughts—What Can You Do about the Infrastructure Crisis? The, 2188

Powell, Mark D.
see Reed, Dorothy A., 457
see Reed, Dorothy A., 2088

Powell, Ronald
Sleep Deprivation and Its Consequences in Construction Workers, 422

Pradyumna, S.
Dynamic Instability of Functionally Graded Shells Using Higher-Order Theory, 515

Prasad, K. S. Hari
Estimation of Unsaturated Hydraulic Parameters from Infiltration and Internal Drainage Experiments, 1283

Prasad, Ram Kailash
Health-Risk-Based Remedial Alternatives for Contaminated Aquifer Management, 2101

Prasad, T. Devi
Design of Pumped Water Distribution Networks with Storage, 1971

Prasher, Shiv O.
see Kumar, Harjinder, 649

Prater, Carla S.
see Lindell, Michael K., 2085

Praticò, F. G.
see Megali, G., 1442

Prats, Alberto García
Performance Evaluation and Uncertainty Measurement in Irrigation Scheduling Soil Water-Balance Approach, 1280

Pré, Pascaline
see Giraudet, Sylvain, Ph.D., 620

Prentice, S. E.
see Bachand, P. A. M., Ph.D., 746

Preston, Howard, P.E.
see Isebrands, Hillary N., P.E., 1891

Prevatt, D. O.
Engineering Perspectives on Reducing Hurricane Damage to Housing in CARICOM Caribbean Islands, 2092

Prevatt, David O., P.E.
On the Job versus Graduate School Training of Forensic Engineers—An Instructor and Professional Engineer's View, 1503
Wind Tunnel Studies on Sawtooth and Monosloped Roofs, 1722

Price, Roland
see Barreto, Wilmer, 2014
see van Andel, Schalk Jan, 1244

Priddy, Lucy Phillips, P.E.
Full-Scale Field Testing for Verification of Mechanical Properties of Polyurethane Foams for Use as Backfill in PCC Repairs, 1367

Probst, Aaron D.
Composite Flexural Behavior of Full-Scale Concrete-Filled Tubes without Axial Loads, 1744

Prohaska, P. D.
Investigation of Flow through Orifices in Riser Pipes, 1238

Prokhorov, Eugenio
see Kovalenko, Yuriy, 977

Prokić, A.
Effect of Bracing on Linear Free Vibration Characteristics of Thin-Walled Beams with Open Cross Section, 487

Propato, Marco
Linear Algebra and Minimum Relative Entropy to Investigate Contamination Events in Drinking Water Systems, 2007
see Tryby, Michael E., 2024

Prota, A.
see Di Ludovico, M., 228

Prota, Andrea
see Asprone, Domenico, Ph.D., 239
see Di Ludovico, Marco, 231
see Di Ludovico, Marco, 235
see Nardone, Fabio, Ph.D., 1752

Provenzano, Giuseppe
see Martí, Pau, 1200

Prozzi, Jorge, ed.
see Huang, Baoshan, ed., 2267

Prozzi, Jorge A.
Average Treatment Effect for Modeling Maintenance Work, 1175
see Hong, Feng, 1812

Pryor, Steven E.
see van de Lindt, John W., 1732

Psimoulis, Panos A., Ph.D.
see Stiros, Stathis C., 1787

Puckett, Jay A., Ph.D., P.E.
Fatigue Testing of Stiffened Traffic Signal Structures, 1726

Puhakka, Jaakko A.
see Kolehmainen, Reija E., Ph.D., 682

Puig, V.
see Duviella, E., 1260

Puleo, Jack A.
Estimating Alongshore Sediment Transport and the Nodal Point Location on the Delaware–Maryland Coast, 2042

Pulijala, S.
see Song, C. R., 818

Pulket, Thaveeporn
see Arditi, David, 269

Pulugurtha, Srinivas S., Ph.D., P.E.
Assessment of Link Reliability as a Function of Congestion Components, 1886

Puppala, Anand J, ed.
see Hoyos, Laureano R., ed., 2243

Puppala, Anand J., Ph.D., P.E.
Forensic Investigations to Evaluate Sulfate-Induced Heave Attack on a Tunnel Shotcrete Liner, 1446
Ground Improvement and Geosynthetics (GSP 207), 2251
see Fratta, Dante O., Ph.D, P.E., ed., 2247
see Madhyannapu, Raja Sekhar, Ph.D., 785
see Saride, Sireesh, Ph.D., 1409

Purohit, Joe
see Viswanathan, Shekar, 684

Putman, Bradley J.
Characterization of the Interaction Effect of Crumb Rubber Modified Binders Using HP-GPC, 1356

Putzar, R.
see Schonberg, W. P., 48

Qian, Shunzhi
see Zhang, Han, Ph.D., 1194

Qian, Xuede
Modification to Translational Failure Analysis of Landfills Incorporating Seismicity, 844

Qiang, Han
see Xiaoqing, Zhang, Ph.D., 493

Qiao, Liping, Ph.D.
see Liu, Jian, Ph.D., 1352

Qiao, Pizhong, P.E.
Local Delamination Buckling of Laminated Composite Beams Using Novel Joint Deformation Models, 514
see Chen, Fangliang, 500

Qiao, Qing-Song
Modeling Unsteady Open-Channel Flow for Controller Design, 1243

Qin, Dayong
see Sang, Xuefeng, 1201

Qin, Hui
see Li, Yinghai, 1981

Qin, Lei
Embedded Cement-Based Piezoelectric Sensors for Acoustic Emission Detection in Concrete, 1494

Qin, Xiao, Ph.D., P.E.
see Chen, Yali, Ph.D., 1816

Qingsong, Wei
Experimental Study on the Multisegment Regime of the Water Flow in Drip Emitters, 1228

Qiu, Tong
Analytical Solution for Biot Flow–Induced Damping in Saturated Soil during Shear Wave Excitations, 919

Qiu, Yaqin, Ph.D.
Valuation of Flood Reductions in the Yellow River Basin under Land Use Change, 1969

Qu, Bing
Capacity Design of Intermediate Horizontal Boundary Elements of Steel Plate Shear Walls, 1673

Qu, Si-min
see Shi, Peng, 1093

Qu, Weilian
see Zhou, Qiang, 599

Qu, Z.
see Godat, A., 202

Quaranta, Giuseppe
see Monti, Giorgio, 278

Quddus, Mohammed A.
Road Traffic Congestion and Crash Severity: Econometric Analysis Using Ordered Response Models, 1833

Quek, Ser-Tong
see Phoon, Kok-Kwang, 817

Quevedo, J.
see Duviella, E., 1260

Ra, ChangSix
Swine Wastewater Treatment Using Submerged Biofilm SBR Process: Enhancement of Performance by Internal Circulation through Sand Filter, 679

Raad, Darian
Multiobjective Optimization for Water Distribution System Design Using a Hyperheuristic, 2019

Rabinovitch, Oded
see Elmalich, Dvir, 557
see Hamed, Ehab, 214

Racoviceanu, Alina I.
Life-Cycle Perspective on Residential Water Conservation Strategies, 1166

Radetski, Claudemir M.
see Corrêa, Albertina X. R., 613

Radhakrishnan, Padmakumar
see Mathew, Tom V., 1923

Radice, Alessio
see Ballio, Francesco, 985

Radspinner, R. R.
River Training and Ecological Enhancement Potential Using In-Stream Structures, 1045

Radwan, Essam, Ph.D., P.E.
see Harb, Rami, Ph.D., P.E., 1900
see Russo, Chris, 1798
see Serag, Engy, Ph.D., 415

Rafiq, M. Y.
see Zhang, Yu, 277

Rafiq, Yaqub M.
see Zhou, Guangchun, 296

Ragheb, A. E.
Using Filtered and Semicontinuous High Rate GPS for Monitoring Deformations, 1775

Rahai, Ali R.
see Sadeghian, Pedram, 221

Rahardjo, Harianto
Effects of Groundwater Table Position and Soil Properties on Stability of Slope during Rainfall, 924
see Guan, Goh Shin, 832

Rahman, A.
see Hawileh, R., 1347

Rahman, Sharif
Statistical Moments of Polynomial Dimensional Decomposition, 549

Rahmeyer, William J., P.E.
see Sharp, Zachary B., 946

Rains, Mark Cable
see Exner-Kittridge, Michael Grant, 1125

Raisee, Mehrdad
see Riasi, Alireza, 1039

Rajabipour, Farshad
Investigating the Alkali-Silica Reaction of Recycled Glass Aggregates in Concrete Materials, 1480

Rajagopal, K.
see Murugesan, S., 786

Rajagopalan, Balaji
see Apipattanavis, Somkiat, 429
see Apipattanavis, Somkiat, 1123

Rajaković, Lj. V.
see Jovanović, B. M., 753

Rajani, Balvant
see Liu, Zheng, 288

Rajaratnam, N.
Turbulent Flow near Vertical Angled Fish Screen, 1042
see Cai, Jianan, 577
see Hall, Neil, 1017

Raju, P. S. N.
see Durgaprasad, J., 2120

Ramachandra, L. S.
see Maitra, Swati Roy, 1810

Ramamurthy, A. S.
see Saghravani, S. F., 961

Ramanujam, J. M.
see Vardanega, P. J., 1391

Rambo-Roddenberry, Michelle, P.E.
see Sobanjo, John, P.E., 158

Ramírez, A.
see Gallego, E., 394

Ramme, Bruce W., Ph.D., P.E.
see Dombrowski, Frank J., CHMM, 716

Ramos, Alfredo
see Kovalenko, Yuriy, 977

Ramos, Helena
see Covas, Dídia, 1984

Ramos, Óscar Ramón
see Pantaleón, Marcos J., 156

Rampini, A.
see Rossi, S., 1224

Ramseyer, Chris, Ph.D., P.E.
see Probst, Aaron D., 1744

Randall, Paul M.
Bench-Scale Evaluation of Chemically Bonded Phosphate Ceramic Technology to Stabilize Mercury Waste Mixtures, 639

Randolph, Mark F.
Parametric Solutions for Slide Impact on Pipelines, 866
see Low, Han Eng, 925
see Wang, Dong, 808
see Zhu, Hongxia, 27

Randolph, Mark. F.
see Gourvenec, Susan, 14

Ranga Raju, Kittur G.
see Khullar, Narinder K., 999

Ranjan, Ram
Factors Affecting Participation in Spot and Options Markets for Water, 2004

Ranjithan, Ranji S.
see Mirghani, Baha Y., 306

Ranjithan, S. Ranji
see Tryby, Michael E., 2024

Ranocchiai, G.
see Bati, S. Briccoli, 1383

Ransinchung R. N., G. D.
Investigations on Pastes and Mortars of Ordinary Portland Cement Admixed with Wollastonite and Microsilica, 1374

Rao, B. Hanumantha
Establishing Soil-Water Characteristic Curve of a Fine-Grained Soil from Electrical Measurements, 847

Rao, K. V. Krishna
see Mir, M. S., 1925

Rao, Parthasaradhi Gangadhara
see Venot, Jean-Philippe, 1267

Rao, S. P.
see Wang, Chen, Ph.D., 455

Rao, Sudhakar M.
see Thyagaraj, T., 938

Rao, V. V. S. Gurunadha
see Mondal, Arpita, 1091

Raphael, Benny
see Saitta, Sandro, 262

Rasdorf, William, Ph.D., P.E.
Field Procedures for Real-World Measurements of Emissions from Diesel Construction Vehicles, 1186
Public versus Private Perceptions on Hiring an External Program Manager, 336
see Zhang, Guanghua, M.S., 1871

Rashid, Mark M.
see Brandenberg, Scott J., 857

Rashid, S. Abdul
see El-Harbawi, Mohanad, 2106

Rashid, Z. Abdul
see El-Harbawi, Mohanad, 2106

Rasmussen, Kim J. R.
see Rossi, Barbara, 1643
see Rossi, Barbara, 1644

Rast, Walter
see Moltz, Heidi L. N., 1088

Rastogi, A. K.
see Patel, H. M., 1211
see Patil, S., 1157

Rastogi, Rajat
Willingness to Shift to Walking or Bicycling to Access Suburban Rail: Case Study of Mumbai, India, 1917
see Laxman, Kotkar Kishor, 1919

Rasulo, Giacomo
see Del Giudice, Giuseppe, 1030

Rathje, Ellen M., Ph.D.
Influence of Input Motion and Site Property Variabilities on Seismic Site Response Analysis, 833

Rattanashotinunt, Chaiyanunt
see Sata, Vanchai, 1459

Ray, Patrick A.
Integrated Optimization of a Dual Quality Water and Wastewater System, 1962

Ray, Ram L.
Impacts of Unsaturated Zone Soil Moisture and Groundwater Table on Slope Instability, 914

Ray, Srimanta
Diverting Electron Fluxes to Hydrogen in Mixed Anaerobic Communities Fed with Glucose and Unsaturated C18 Long Chain Fatty Acids, 677

Raychowdhury, Prishati
Sensitivity of Shallow Foundation Response to Model Input Parameters, 827

Read, Wayne
see Lovisa, Julie, 31

Reale, C., Ph.D.
see Bati, S. Briccoli, 1383

Reckhow, Kenneth H.
see Alameddine, Ibrahim, 755

Records, Michael K.
see Neupauer, Roseanna M., Ph.D., P.E., 2018

Recupero, Antonino
see Spinella, Nino, 1647

Redder, Todd
see Canale, Raymond P., 2017

Reddy, K. P. J.
see Kulkarni, Vinayak, 68

Reddy, K. S.
see Maitra, Swati Roy, 1810

Reddy, Krishna R.
Beneficial Use of Shredded Tires as Drainage Material in Cover Systems for Abandoned Landfills, 2100
see Sivakumar Babu, G. L., 2110

Reddy, M. Janga
Overtopping Probability Constrained Optimal Design of Composite Channels Using Swarm Intelligence Technique, 1259

Reed, Dorothy A.
Energy Infrastructure Damage Analysis for Hurricane Rita, 2088
Energy Supply System Performance for Hurricane Katrina, 457

Reed, Patrick
see Nicklow, John, 2001

Regmi, Gyanendra
see Indraratna, Buddhima, 862

Reichard, Georg
see Chen, Qian, 333

Reichle, Scott
see Zhou, Guoqing, 1825

Reichold, Laurel
Simulation-Optimization Framework to Support Sustainable Watershed Development by Mimicking the Predevelopment Flow Regime, 1996

Reid, Robert L.
The Art of Science, 2172
The Disney Story, 2166
Dramatic Inclination, 2202
Emphasis on Expansion, 2206
A Glittering Center, 2198
High Rolling Steel, 2167
Mastering a Mountain, 2223
New Life for an Old Line, 2192
Transparent Beauty, 2207

Reinhold, Richard A., P.E.
see Dunn, Chad J., P.E., 2161

Reinhorn, Andrei M., P.E.
see Gilani, Amir S. J., SE, 82
see Roh, Hwasung, 1661

Reinschmidt, Kenneth F.
see Kim, Byung-Cheol, 398
see Pillai, Radhakrishna G., 1451

Remennikov, Alex M.
see Kaewunruen, Sakdirat, 1682

Rémi, Beguin
see Cyril, Guidoux, Ph.D., 846

Ren, Shibo
Dynamic Simulation of the Maglev Vehicle/Guideway System, 120

Ren, Zhaomin
see Xue, Xiaolong, 1335

Rendell, Edward G.
see Schwarzenegger, Arnold, 2187

Reneckis, Dziugas
Out-of-Plane Seismic Performance and Detailing of Brick Veneer Walls, 1685

Reniers, Ad
see Cáceres, Iván, 973

Rennie, Colin D.
see Ebisa Fola, Miressa, 997

Rens, Amy J., P.E.
see Rens, Kevin L., Ph.D., P.E., 2066

Rens, Kevin L., Ph.D., P.E.
Leading, Learning, and Living the Shackleton Way: Education and Practice, 2066
Rating City and County of Denver Urban Pavement Constructability Using a Profiler, 2133
see Jiang, Xin, 1554
see Jiang, Xin, 1555

Renz, David O., Ph.D.
see O'Bannon, Deborah J., Ph.D., P.E., 2075

Renzetti, Steven
see Bruneau, Joel F., 1965

Repolho, Hugo M.
Optimum Location of Motorway Interchanges: Users' Perspective, 1892

Requena, João Alberto Venegas
see de Fátima Vieira, Rosilene, 2154

Reshmidevi, T. V.
Knowledge-Based Model for Supplementary Irrigation Assessment in Agricultural Watersheds, 1242

Resop, Jonathan P.
Terrestrial Laser Scanning for Monitoring Streambank Retreat: Comparison with Traditional Surveying Techniques, 1023

Rew, Stephanie N.
Analysis and Synthesis of Transmission Loss Hydrographs, 1271

Reynders, Edwin
Combined Experimental-Operational Modal Testing of Footbridges, 527

Rezaei, S. H. Changiz
see El-Dakhakhni, W. W., Ph.D., P.E., 1527

Rezaiee-Pajand, M.
Application of Exponential-Based Methods in Integrating the Constitutive Equations with Multicomponent Nonlinear Kinematic Hardening, 606

Rezgui, Yacine
Exploring the Potential of SME Alliances in the Construction Sector, 370
see Boddy, Stefan, 301

Rha, Changsoon
see Lemnitzer, Anne, 936

Rhyner, Frederick C., P.E.
see Lowe, Steven R., P.E., 2214

Riasi, Alireza
Numerical Modeling for Hydraulic Resonance in Hydropower Systems Using Impulse Response, 1039

Ricciardi, Giuseppe
see Impollonia, Nicola, 528

Riccio, Aniello
see Borrelli, Rosario, 72

Rice, J. A.
see Linderman, Lauren E., 601

Rice, John D.
Deformation and Cracking of Seepage Barriers in Dams due to Changes in the Pore Pressure Regime, 776
Findings of Case Histories on the Long-Term Performance of Seepage Barriers in Dams, 775

Richard, Martin
see Morse, Brian, 963

Richards, Paul W., P.E.
Estimating the Stiffness of Eccentrically Braced Frames, 2139
Seismic Column Demands in Ductile Braced Frames, 2

Richardson, David N., P.E.
see Belarbi, Abdeldjelil, P.E., 1515

Richardson, John H.
see Gkikas, Nikolaos, 1837

Ricles, James M.
see Chen, Cheng, 508
see Chen, Cheng, 1651

Riemer, Michael
see Dashti, Shideh, 788
see Dashti, Shideh, 864

Riemer, Michael F.
see Bray, Jonathan D., 10
see Zekkos, Dimitrios, 895

Ries, Robert J.
see Bilec, Melissa M., 1184

Rifai, Hanadi S.
see Desai, Anuradha M., 762

Rijo, Manuel
Supervision and Water Depth Automatic Control of an Irrigation Canal, 1199

Riley, David
see Korkmaz, Sinem, 402

Riley, David R.
see Korkmaz, Sinem, 80

Rima, Jamil, Ph.D.
Removal of TDS from Cooling Tower Water by Using EDTA-Modified Bagasse Fibers, 680

Rinehart, Stephen A.
see Chung, Jae H., 1636

Ringler, Claudia
see Alcoforado de Moraes, Márcia Maria Guedes, 2009

Rittmann, Bruce E.
Environmental Biotechnology in Water and Wastewater Treatment, 650

Rivière, N.
see Kesserwani, G., 1010

Robert, Mathieu
Behavior of GFRP Reinforcing Bars Subjected to Extreme Temperatures, 211
Physical, Mechanical, and Durability Characterization of Preloaded GFRP Reinforcing Bars, 213
Temperature as an Accelerating Factor for Long-Term Durability Testing of FRPs: Should There Be Any Limitations?, 212

Roberts, Jesse
see Jepsen, Richard, 2058

Roberts, Paul
see Harris, Richard, CEng, 2220

Roberts, Roger
see Al-Qadi, Imad L., P.E., 1830

Robertson, P. K.
Evaluation of Flow Liquefaction and Liquefied Strength Using the Cone Penetration Test, 856

Roberts-Wollmann, Carin L.
see Dymond, Benjamin Z., 152

Robinson, Hilary
see Fang, Zheng, 2020

Robinson, R. Bruce
see Huo, Jinsheng, 661

Rodrigues, Francisco Aparecido
see de Gouveia, Lilian Tais, 308

Rodríguez Díaz, J. A.
see Pérez Urrestarazu, L., 1253

Rodriguez, Fabrice
see Gironás, Jorge, 1055

Rodríguez, José L. García
Estimation of Slope Length Value of RUSLE Factor L Using GIS, 1128

Rodriguez-Hernandez, Jorge, Ph.D.
Long-Term Simulation of a System for Catchment, Pretreatment, and Treatment of Polluted Runoff Water, 773

Roeder, Charles W.
Strength and Stiffness of Circular Concrete-Filled Tubes, 1757

Roesler, Jeffery R.
see Hiller, Jacob E., 1858

Roesner, Larry A., P.E.
see Gironás, Jorge, 1055

Roffel, A. J.
see Hazra, B., 545

Rogers, C. D. F.
see Glendinning, S., 659

Rogers, David, P.E., Ph.D.
Celebrating Hoover Dam: The Majesty of Hoover Dam, 2216

Rogers, Jerry R., Ph.D., P.E.
see Wiltshire, Richard L., P.E., 2256

Roh, Hwasung
Nonlinear Static Analysis of Structures with Rocking Columns, 1661

Rojas, Eddy M., Ph.D.
see Lucko, Gunnar, Ph.D., 327

Rokhina, Ekaterina V.
see Vilhunen, Sari, 640

Rollins, Kyle M., Ph.D.
Dynamic Compaction of Collapsible Soils Based on U.S. Case Histories, 890
Increased Lateral Abutment Resistance from Gravel Backfills of Limited Width, 795
see Weaver, Thomas J., Ph.D., P.E., 837

Romanoschi, Stefan, Ph.D., P.E.
see Gedafa, Daba S., Ph.D., EIT, Aff.ASCE, 1395

Romeijn, Arie
see Ren, Shibo, 120

Rominger, Jeffrey T.
Effects of Added Vegetation on Sand Bar Stability and Stream Hydrodynamics, 1047

Rondón, H. A.
see Wichtmann, T., 845

Rong, Jian
see Sun, Lishan, 1951
see Wei, Heng, Ph.D., P.E., ed., 2257

Roode, Tom, P.E., ed.
see Ruchti, George, ed., 2268

Rose, Geoff
see Moridpour, Sara, 1894

Rose, Geoffrey
see Mazloumi, Ehsan, 1855

Roseen, Robert, Ph.D., P.E.
see Avellaneda, Pedro, 616

Rosenberg, David E.
Residential Water Demand under Alternative Rate Structures: Simulation Approach, 1999

Rosenboom, O. A.
see Chen, G. M., 227

Roshni, Thendiyath
see Pagliara, Stefano, 1044

Rosowsky, David
see Choe, Do-Eun, 554
see Zhong, Jinquan, 480

Rosowsky, David V.
see Pang, Weichiang, 1688
see Wang, Yue, 1704

Ross, Mark
see Zhang, Jing, 1205

Ross, Mark A., P.E.
see Nilsson, Kenneth A., 1134
see Zhang, Jing, 1256

Rossi, Barbara
Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Experimental Investigations, 1643
Combined Distortional and Overall Flexural-Torsional Buckling of Cold-Formed Stainless Steel Sections: Design, 1644

Rossi, S.
Operational Monitoring of Daily Crop Water Requirements at the Regional Scale with Time Series of Satellite Data, 1224

Rotonda, Tatiana
Geomechanical Characterization of the Volcaniclastic Material Involved in the 2002 Landslides at Stromboli, 811

Rotter, J. Michael
see Sadowski, Adam J., 534

Rousseau, A. N.
see Bourdillon, R., 1151

Roussinova, Vesselina
Investigation of Fluid Structures in a Smooth Open-Channel Flow Using Proper Orthogonal Decomposition, 956

Rovero, L.
see Bati, S. Briccoli, 1383

Rowe, R. Kerry
Antioxidant Depletion from a High Density Polyethylene Geomembrane under Simulated Landfill Conditions, 865
Effects of Thickness on the Aging of HDPE Geomembranes, 803
Numerical Examination of a Method for Reducing the Temperature of Municipal Solid Waste Landfill Liners, 703
see Dickinson, S., 828
see McWatters, Rebecca S., 889

Rowe, Reggie L., P.E.
Integrated Conveyance Condition Assessment Techniques Support Asset Management and Capacity Driven Projects, 1573

Roy, Susmita
Modeling Arsenite Adsorption on Rusting Metallic Iron, 657

Roy-Poirier, Audrey
Review of Bioretention System Research and Design: Past, Present, and Future, 710

Royuela, Álvaro
see Martí, Pau, 1200
see Martí, Pau, 1218

Rozell, Daniel, P.E.
Modeling the Removal of Arsenic by Iron Oxide Coated Sand, 636

Rozos, Evangelos
Design Robustness of Local Water-Recycling Schemes, 2012

Ruan, S.
see Gordaninejad, F., 1619

Rubinacci, Guglielmo
see Asprone, Domenico, Ph.D., 239

Ruchti, George, ed.
Pipelines 2010: Climbing New Peaks to Infrastructure Reliability —Renew, Rehab, and Reinvest, 2268

Rucinski, Daniel K.
Dual Discharge Approach to Accessing Assimilative Capacity: Probabilistic Analysis and Management Application, 688

Rui, Xiaoting
see Abbas, Laith K., 62

Rujikiatkamjorn, Cholachat
see Ghandeharioon, Ali, 17

see Indraratna, Buddhima, 841
see Indraratna, Buddhima, 863

Rukzon, Sumrerng
Strength and Carbonation Model of Rice Husk Ash Cement Mortar with Different Fineness, 1368

Rusch, Kelly A., P.E.
see Gutierrez-Wing, Maria T., 693

Rushing, John F.
Investigation of Laboratory Procedure for Evaluating Chemical Dust Palliative Performance, 1472

Russo, Chris
Calibration and Verification of SHAKER, a Deterministic Toll Plaza Simulation Model, 1798

Russo, Giovanni
see Creaco, Enrico, 511

Rusu, Eugen
Validation of Two Wave and Nearshore Current Models, 2032

Ruwanpura, Janaka, Ph.D., PQS
see Jergeas, George F., Ph.D., P.E., 2132

Ryoo, Boong Yeol
Web-Based Construction Project Specification System, 281

Ryu, Seungkyu
see Chen, Anthony, 1848

Saady, Noori M. Cata
see Ray, Srimanta, 677

Saafi, Mohamed
Extending the Service Life of Electric Distribution and Transmission Wooden Poles Using a Wet Layup FRP Composite Strengthening System, 1537

Saatci, Yusuf
Decolorization and Mineralization of Remazol Red F3B by Fenton and Photo-Fenton Processes, 722

Sabatini, D. A.
see Mlilo, T. B., 655

Sabatino, C.
see Carravetta, A., 1027

Sabetghadam, F.
see Taeibi-Rahni, M., 43

Sabol, Kevin
see Apipattanavis, Somkiat, 429

Sabour, M. H.
Thermal Scale Modeling by FEM and Test, 41

Sabziparvar, Ali-Akbar, Ph.D.
Regional Estimation of Reference Evapotranspiration in Arid and Semiarid Regions, 1279

Sack, Ronald
see ElGawady, Mohamed, 179

Sacks, R.
Empire State Building Project: Archetype of "Mass Construction", 384
Teaching Building Information Modeling as an Integral Part of Freshman Year Civil Engineering Education, 1585
see Eastman, C. M., 264

Sacks, Rafael
Interaction of Lean and Building Information Modeling in Construction, 411

Sadeghi, J.
Development of Railway Track Geometry Indexes Based on Statistical Distribution of Geometry Data, 1862

Sadeghi, Javad
Development of Nonlinear Railway Track Model Applying Modified Plane Strain Technique, 1903

Sadeghi, Seyed Hamidreza
Derivation of Flood Hydrographs for Ungauged Upstream Subwatersheds Using a Main Outlet Hydrograph, 1160

Sadeghian, Pedram
Bond-Slip Analytical Formulation toward Optimal Embedment of Concrete-Filled Circular FRP Tubes into Concrete Footings, 512
Experimental Study of Rectangular RC Columns Strengthened with CFRP Composites under Eccentric Loading, 221

Sadek, Fahim, Ph.D.
see Alashker, Yasser, Ph.D., 1724

Sadek, Marwan
Influence of Nonlinearity on the Stress Distribution in the Soil—Application to Road Engineering Problems, 1797

Sadek, Salah
Shear Strength of Fiber-Reinforced Sands, 821
see Najjar, Shadi S., 898

Sadeque, M. A. F.
see Rajaratnam, N., 1042

Sadiq, Abdul-Akeem
Obstacles and Disaster Risk Reduction: Survey of Memphis Organizations, 2089

Sadiq, Rehan
see Liu, Zheng, 288

Sadowski, Adam J.
Study of Buckling in Steel Silos under Eccentric Discharge Flows of Stored Solids, 534

Sadrekarimi, Abouzar, Ph.D.
Shear Band Formation Observed in Ring Shear Tests on Sandy Soils, 809

Sáez, A. Eduardo
see Shan, Jilei, 635

Safi, C.
see Khasnabis, S., 1927

Safouhi, Hassan, Ph.D.
see Hasan, Shafiul, 332

Sage, Paul
see Wu, Zheng Yi, 1970

Sagheer, Mohammed
see Iyer, K. C., 329

Saghravani, S. F.
Penetration Length of Confined Counter Flowing Free Jets, 961

Saha, Nayan
see Tarefder, Rafiqul A., 1829

Saha, Nilanjan
Monte–Carlo Based Method for Predicting Extreme Value Statistics of Uncertain Structures, 605

Saha, Papita
Application of Natural Clayey Soil as Adsorbent for the Removal of Copper from Wastewater, 769

Saha, R.
Modified Horton's Equation to Model Advance Trajectory in Furrow Irrigation Systems, 1227

Sahabi, Danladi M.
Comparison of Arsenate, Lead, and Cadmium Adsorption onto Aged Biofilter Media, 668

Sahoo, Bharat C.
Modeling Evaporative Water Loss from the On-Farm Reservoir with Biological Shading, 1111

Said, Ahmed
see Zhang, Jing, 1205

Said, Hemdan
Deflection Prediction for FRP-Strengthened Concrete Beams, 200

Said, Jalali
see Fernando, Pacheco-Torgal, 1444

Saitta, Fernando
see Impollonia, Nicola, 528

Saitta, Sandro
Feature Selection Using Stochastic Search: An Application to System Identification, 262

Sajid, M.
Series Solution of Wire Coating Analysis Involving MHD Johnson-Segalman Fluid, 47

Saka, Mehmet Polat
see Hasançebi, Oğuzhan, 1650

Sakura-Lemessy, Donna
see Chin, David A., P.E., 1995

Salas, Jose D.
Nonparametric Simulation of Single-Site Seasonal Streamflows, 1086

Salem, Ossama M., P.E.
see Hegab, Mohamed Y., P.E., 1566

Salgado, R.
see Chakraborty, T., 825

Saliminejad, Siamak
see Gharaibeh, Nasir G., 1870

Sallanko, Jarmo, D.Sc.
Practical Melting Forecasting of Artificial Snow Made from Treated Wastewater, 173

Salomoni, V. A.
see Majorana, C. E., 93

Saltykov, L. S.
Impact of Heterogeneity on Gamma-Spectrometry Data at Nondestructive Assay of Radioactive Waste, 2117

Saluja, Chitwan
see Leicht, Robert M., 322

Salyards, Kelly A., P.E.
Evaluation of Vibration Assessment Criteria and Their Application to Stadium Serviceability, 1505

Samani, Nozar
see Sedghi, Mohammad Mahdi, 1153

Samimi, Amir
Health Impacts of Urban Development and Transportation Systems, 1940

Samuel Kirubaharan, C.
see Mohrlok, Ulf, 2115

Samui, Pijush
Site Characterization Model Using Artificial Neural Network and Kriging, 30

Sanahuja, Julien, Ph.D.
Micromechanical Explanation of Elasticity and Strength of Gypsum: From Elongated Anisotropic Crystals to Isotropic Porous Polycrystals, 483

Sánchez, Tony, Ph.D., P.E.
Path To Safety, 2163

Sandekian, Robyn
see Amadei, Bernard, 1590

Sanders, Brett F.
see Howes, Daniel J., 1269

Sandford, Thomas, P.E.
see Davids, William G., P.E., 97

Sandhu, Suprea
see Shehab, Tariq, 1574

Sandu, C.
see Steets, J., 1864
see Steets, J., 1865

Sang, Xuefeng
Development of Soil and Water Assessment Tool Model on Human Water Use and Application in the Area of High Human Activities, Tianjin, China, 1201

Sanin, Maria V.
see Wijewickreme, Dharma, 905

Sanjayan, J. G.
see Aly, T., 1399

Sanjayan, Jay G.
see Collins, Frank G., 1369

San-Jose, J. Tomas
see Harajli, M., 1475

Sankey, John, P.E.
see Stuedlein, Armin W., Ph.D., P.E., 851

Sannasiraj, S. A.
see Krishnakumar, C., 2034

Sanner, Robert M.
see Henshaw, Carl Glen, 56

Sansalone, J.
Volumetric Filtration of Rainfall Runoff. II: Event-Based and Interevent Nutrient Fate, 760
see Liu, B., 759

Sansalone, John
Distribution of Metals for Particulate Matter Transported in Source Area Rainfall-Runoff, 628
see Magill, Natalie, 629

Sansalone, John J.
see Ma, Jia, 744

Sant, Gaurav
Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages, 1371

Santos, H. A. F. A., Ph.D.
Equilibrium-Based Finite-Element Formulation for the Geometrically Exact Analysis of Planar Framed Structures, 604

Santos, Luís Guilherme de Picado, Ph.D.
Assessment of the Use of Hot-Mix Recycled Asphalt Concrete in Plant, 1913

Santoso, Anastasia
see Phoon, Kok-Kwang, 817

Sanyal, S. K.
see Saha, Papita, 769

Saquing, Jovita
see Barlaz, Morton A., 707

Saravanane, R.
see Jayakumar, S., 1440

Sarhadi, Ali
see Modarres, Reza, 1083

Saride, Sireesh, Ph.D.
Use of Lightweight ECS as a Fill Material to Control Approach Embankment Settlements, 1409
see Puppala, Anand J., Ph.D., P.E., 1446

Sariyar, O.
Expert System Approach for Soil Structure Interaction and Land Use, 1931

Sarkar, Debasis
Design and Application of Risk Adjusted Cumulative Sum for Strength Monitoring of Ready Mixed Concrete, 376

Sarkar, P. P.
see Haan, F. L., 1616

Sarkar, Partha
see Chang, Byungik, 531

Sarkar, S.
Performance Investigation of Nakagami-m Distribution to Derive Flood Hydrograph by Genetic Algorithm Optimization Approach, 1121

Sarkar, Sudeep
see Amarasiri, Saumya, 1840

Sarrazy, Fanny
see Propato, Marco, 2007

Sarvi, Majid
see Moridpour, Sara, 1894

Sasanian, Navid
see Galal, Khaled, 192

Sasic, Srdjan
see Bondelind, Mia, 771

Sata, Vanchai
Compressive Strength and Heat Evolution of Concretes Containing Palm Oil Fuel Ash, 1459

Sato, Atsushi
Seismic Performance Factors for Cold-Formed Steel Special Bolted Moment Frames, 1702
see Uang, Chia-Ming, 1701

Sause, Richard
see Dong, Jun, 1624
see Naito, Clay, 133

Savi, F.
see Petaccia, G., 970

Savic, Dragan
see Dorini, Gianluca, 2022
see Nicklow, John, 2001

Savic, Dragan A.
see Weickgenannt, Martin, 2023

Savvopoulos, Georgios C.
see Karapiperis, Dennis, 2201

Sawalha, Ola
Modeling the Relationship between Capillary Suction Time and Specific Resistance to Filtration, 720

Sayed, Khaled El
see Karapiperis, Dennis, 2201

Sayed, Tarek, Ph.D.
see Khondakar, Bidoura, 1882
see Lovegrove, Gord, 1802

Schaefer, V. R., P.E.
see Kevern, J. T., 1393

Schaeffer, Blake
see Xia, Meng, 725

Schäfer, F.
see Schonberg, W. P., 48

Schanack, Frank
see Pantaleón, Marcos J., 156

Schellart, A. N. A., Ph.D.
Estimation of Uncertainty in Long-Term Sewer Sediment Predictions Using a Response Database, 986

Schiff, Anshel J., ed.
see Tang, Alex K., P.E., ed., 2261

Schindler, Anton K.
see Wade, Samuel A., 1363

Schlue, Benjamin Friedrich, Ph.D.
Influence of Shear Rate on Undrained Vane Shear Strength of Organic Harbor Mud, 913

Schluter, Edward R., P.E.
see Lowe, Steven R., P.E., 2214

Schmeeckle, Mark
see Travis, Quentin B., 869

Schmidt, Arthur R., Ph.D.
see León, Arturo S., Ph.D., 1015

Schmidt, Jacob W.
Development of Mechanical Anchor for CFRP Tendons Using Integrated Sleeve, 216

Schmidt, Keith
see Khaitan, Sameer, 726

Schmidt, Richard J.
see Miller, Joseph F., 1731

Schmidt, Ryan, ed.
see Chen, Shen-En, Ph.D.; P.E., ed., 2260

Schmitz, G. H.
see Philipp, A., 972

Schmitz, Gerd H.
see Schütze, Niels, 1290

Schnabel, William
see Toniolo, Horacio, 1040

Schnabel, William E.
Variability, Seasonality, and Persistence of Fecal Coliform Bacteria in a Cold-Region, Urban Stream, 171

Schober, Hans
A New Angle, 2194

Schoellhamer, David
see Gibson, Stanford, 812

Schokker, Andrea J.
see Cervo, Nicholas M., 163

Scholl, Bryan
see Beighley, R. Edward, 1245

Scholz, Miklas
see Sawalha, Ola, 720

Schonberg, W. P.
Some Comments on the Protection of Lunar Habitats against Damage from Meteoroid Impacts, 48

Schubert, Uwe
see Yong, Yi, 1929

Schuettpelz, C. C.
Mechanistic Corrections for Determining the Resilient Modulus of Base Course Materials Based on Elastic Wave Measurements, 881

Schuler, John, P.E.
Rational Three-Step Method for Optimizing Value of Civil Engineering Research, 1322

Schultmann, Frank
see Lim, Jay Na, 371

Schultz, Grant G., Ph.D., P.E., PTOE
Relationship between Access Management and Other Physical Roadway Characteristics and Safety, 1804

Schulz, Mauro
Analysis of Reinforced Concrete Shells with Transverse Shear Forces, 1690

Schumacher, Thomas
Detection of Vehicles with Studded Tires Using Acoustic Emission Sensors Mounted to Highway Bridges, 1839

Schumann, Andreas
see Klein, Bastian, Ph.D., 1092

Schütze, Niels
OCCASION: New Planning Tool for Optimal Climate Change Adaption Strategies in Irrigation, 1290

Schwab, David J.
see Anderson, Eric J., 995

Schwartz, Stuart S.
Effective Curve Number and Hydrologic Design of Pervious Concrete Storm-Water Systems, 1102

Schwarzenegger, Arnold
Special Report: The Infrastructure Roundtables: Concluding Thoughts—It's Time to Get Serious about Investing in Our Infrastructure, 2187

Schweiger, Helmut F.
see Galavi, Vahid, Ph.D., 15

Sciolti, Margherita Stefania
Wet Lay-Up Manufactured FRPs for Concrete and Masonry Repair: Influence of Water on the Properties of Composites and on Their Epoxy Components, 257

Scoble, Kyle P.
Design and Evaluation of Experimental Bridges in Tennessee, 1498

Scott, Michael H.
Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames, 1655
see McKenna, Frank, 271

Scott, Reece M.
see Mander, Thomas J., 142

Scott, Richard
see Kawada, Tadaki, 2255

Scott, W. Richard
see Javernick-Will, Amy N., 369

Scotto, Manuel G.
Clustering Time Series of Sea Levels: Extreme Value Approach, 2048

Scullion, Tom, P.E.
see Wang, Rongxia, 1534
see Zhou, Fujie, 1827

Searer, Gary R.
see Hill, Howard J., 2148
see Hill, Howard J., 2149

Seaver, William L.
see Huo, Jinsheng, 661

Sebaaly, Peter E.
see Hajj, Elie Y., 1809

Sebastian, Wendel
Timber-Limecrete Composite Floors Using Timber Connectors Sloped toward or against Slip, 1761

Sebastijanovic, Nebojsa
Detection of Changes in Global Structural Stiffness Coefficients Using Acceleration Feedback, 578

Secretan, Y.
see Bourdillon, R., 1151

Sedghi, Mohammad Mahdi
Three-Dimensional Semianalytical Solutions of Groundwater Flow to a Well in Fractured Wedge-Shaped Aquifers, 1153

Seeber, Günter
see Hirt, Christian, 1766

Sein, Maung K.
see Azhar, Salman, 323

Selamet, Serdar
see Garlock, Maria E., 1696

Selek, István
see Bene, József Gergely, 1972

Selvakumar, Ariamalar
Role of Stream Restoration on Improving Benthic Macroinvertebrates and In-Stream Water Quality in an Urban Watershed: Case Study, 623

Sen, Dhrubajyoti
see Kuiry, Soumendra Nath, 994

Sen, Rajan
see Suh, Kwangsuk, 215

Sena-Cruz, José M.
see Cunha, Vítor M. C. F., 1340

Senapathi, Sivaji, P.E., ed.
2010 Structures Congress, 2225

Sengupta, Sukalyan, P.E.
see Ergas, Sarina J., P.E., 733

Seniwongse, Muang-sangop, Ph.D.
Slab-on-Grade versus Framed Slab, 94

Senouci, Ahmed B.
see Orabi, Wallied, 1339

Senturk, A. Ekin
see Higgins, Christopher, 110

Seo, Donghee
see Randolph, Mark F., 866

Seo, Min-Woo, Ph.D.
Sequential Analysis of Ground Movements at Three Deep Excavation Sites with Mixed Ground Profiles, 838

Sepe, Marichela
Place Identity and PlaceMaker: Planning the Urban Sustainability, 1932

Sequeiros, Octavio E.
Characteristics of Velocity and Excess Density Profiles of Saline Underflows and Turbidity Currents Flowing over a Mobile Bed, 987

Seracino, Rudolf
see Petersen, Robert B., 250
see Petersen, Robert B., 251

Serag, Engy, Ph.D.
Model for Quantifying the Impact of Change Orders on Project Cost for U.S. Roadwork Construction, 415

Serrette, Reynaud, Ph.D.
Seismic Design Strength of Cold-Formed Steel-Framed Shear Walls, 1718

Sertyesilisik, Begum, Ph.D.
Investigation on Particular Contractual Issues in Construction, 1312

Seta, Elisa
see Lorenzoni, Carlo, 2036

Setareh, Mehdi, Ph.D., P.E.
Vibration Serviceability of a Building Floor Structure. I: Dynamic Testing and Computer Modeling, 1546
Vibration Serviceability of a Building Floor Structure. II: Vibration Evaluation and Assessment, 1547

Setunge, Sujeeva
see Kumar, Dhirendra, 1551

Sevee, John E., P.E.
Effective Porosity Measurement of a Marine Clay, 689

Sever, V. Firat, Ph.D., P.E.
Apparatus for Testing the Combined Effects of Deformation and Chemical Exposure on Polymeric Liners, 1365

Sevim, Barış
see Bayraktar, Alemdar, 1499

Seyedi Hosseininia, Ehsan, Aff.ASCE
Development and Validation of a Two-Phase Model for Reinforced Soil by Considering Nonlinear Behavior of Matrix, 530

Sægrov, Sveinung
see Ugarelli, Rita, 1174

Shabman, Leonard A.
see Deason, Jonathan P., 2029

Shackelford, Charles D., Ph.D.
see Hemsi, Paulo S., Ph.D., 714
see Kang, Jong-Beom, Ph.D., 798
see Kang, Jong-Beom, Ph.D., 907

Shah, Abid A.
Nonlinear Ultrasonic Investigation of Concrete Damaged under Uniaxial Compression Step Loading, 1394

Shah, Surendra P.
see Voigt, Thomas, 1361

Shahandeh, R.
see Showkati, H., 505

Shahrooz, Bahram
see El-Tawil, Sherif, 2273

Shahrooz, Bahram M., Ph.D.
see El-Tawil, Sherif, Ph.D., P.E., 1683

Shahrour, Isam
see Chen, Sheng-hong, 930
see Sadek, Marwan, 1797

Sham, Robin
see Morgenthal, Guido, 108

Shamir, Eylon
Flood Forecasting in Regulated Basins Using the Ensemble Extended Kalman Filter with the Storage Function Method, 1158

Shammaa, Yaser
Experimental Study on Selective Withdrawal in a Two-Layer Reservoir Using a Temperature-Control Curtain, 967

Shamoto, Yasuhiro
see Zhou, Yan-Guo, 789

Shamsabadi, Anoosh
Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills, 123

Shamseldin, Asaad Y.
see Dwivedi, Ambuj, 1019

Shan, Bo
see Xiao, Yan, 145

Shan, Jilei
Evaluating the Mobility of Arsenic in Synthetic Iron-Containing Solids Using a Modified Sequential Extraction Method, 635

Shan, Jingsong
see Wu, Zhimin, 580

Shan, Luyang
see Qiao, Pizhong, P.E., 514

Shang, Feng
see De Sanctis, Annamaria E., 2003

Shang, Julie Q.
see Yeheyis, Muluken B., 690

Shankar, Ravi
see Ahuja, Vanita, 368

Shanthakumar, S.
Methodology for Determining Particle-Size Distribution Characteristics of Fly Ashes, 1389

Shao, Lin
see Zheng, Jianjun, 1478

Shao, Xudong
Experimental Study on Multicantilever Prestressed Composite Beams with Corrugated Steel Webs, 1716

Time-Dependent Behavior of Concrete-Filled Steel Tubular Arch Bridge, 104

Shao, Yixin
see Li, Li, 196
see Monkman, Sean, 1373

Sharif, Hatim O.
Application of a Distributed Hydrologic Model to the November 17, 2004, Flood of Bull Creek Watershed, Austin, Texas, 1120

Sharifian, Mehrzad
see Rezaiee-Pajand, M., 606

Sharma, Bhavna
see Mitch, Derek, 1479

Sharma, Deepak
see Cui, Qingbin, 1172

Sharma, J. S.
see Singh, M. K., 2099

Sharma, Mukesh
see Aatmeeyata, 774

Sharma, Nayan
see Gupta, Umesh P., 1008

Sharma, Siddharth
see Edara, Praveen, 2091

Sharma, Vishal
Characterization of Fly Ash Bituminous Concrete Mixes, 1481

Sharma, Y. C.
see Atalay, E., 2109

Sharp, Michael K.
CPT-Based Evaluation of Liquefaction and Lateral Spreading in Centrifuge, 904

Sharp, Zachary B.
Energy Losses in Cross Junctions, 946

Sharvelle, Sybil
Model Development for Biotrickling Filter Treatment of Graywater Simulant and Waste Gas, 1, 9

Shatnawi, Ehab S.
see Liang, Robert Y., 880

Shatnawi, Fadi M.
Comparison of Flood Top Width Predictions Using Surveyed and LiDAR-Derived Channel Geometries, 1067

Shaw, A. J.
Extension of the Touratier Kinematic Model to Large Strains, Displacements, and Rotations, 587

Shaw, Stephen B.
Evaluating Urban Pollutant Buildup/Wash-Off Models Using a Madison, Wisconsin Catchment, 630

She, Nian, Ph.D.
Physically Based Green Roof Model, 1101

Shebalin, P.
see Davis, C., P.E., 2095

Shedid, Marwan T.
Alternative Strategies to Enhance the Seismic Performance of Reinforced Concrete-Block Shear Wall Systems, 1674

Characteristics of Rectangular, Flanged, and End-Confined Reinforced Concrete Masonry Shear Walls for Seismic Design, 1751

Seismic Performance Parameters for Reinforced Concrete-Block Shear Wall Construction, 1495
see El-Dakhakhni, Wael W., 502

Sheehan, Michael, Ph.D.
Globalization: Conundrums and Paradoxes for Civil Engineering, 2063

Shehab, Tariq
Cost Estimating Models for Utility Rehabilitation Projects: Neural Networks versus Regression, 1574

Sheikh, Abdul H.
see Pandit, Mihir K., 40

Sheikh, S. A.
see Cui, C., 232
see Cui, C., 233

Sheikholeslami, Abdolreza
see Khademi, Navid, 1183

Shekarchi, Mohamad
see Moradi-Marani, Farid, 1525

Shen, Geoffrey Qiping
see Yang, Jing, 391

Shen, Hai
Long-Term Capacity of Plant Mulch to Remediate Trichloroethylene in Groundwater, 727

Shen, Hua
see Ma, Baosong, 1572

Shen, Junan
see Huang, Baoshan, 1416

Shen, Liyin
see Tan, Yongtao, 420

Shen, Qiping
see Xue, Xiaolong, 1335
see Yu, Ann T. W., 1591

Shen, Shihui
Characterization of Fatigue and Healing in Asphalt Binders, 1438

Shen, Shui-Long, ed.
see He, Qiang, ed., 2246

Shen, Yan-Bin, Ph.D.
Accumulative Sliding Construction Method for Large-Span Latticed Shells, 428

Shen, Yi
Modeling Unsteady Flow Characteristics of Hydro-peaking Operations and Their Implications on Fish Habitat, 1052

Shen, Yunzhong
see Li, Bofeng, 1774

Shen, Zhenyao
see Gong, Yongwei, Ph.D., 1161

Sheng, Hua
see Wang, Zong-ping, 626

Shepherd, Susan, Sc.D.
Case Study to Identify Barriers and Incentives to Implementing an Engineering Control for Concrete Grinding Dust, 437

Sherif, A. A.
see El-Harbawi, Mohanad, 2106

Sherif, Ahmed
Excavation Game: Computer-Aided-Learning Tool for Teaching Construction Engineering Decision Making, 1600

Shetab-Boushehri, Sayed-Behzad
see Shetab-Boushehri, Sayed-Nader, 1210

Shetab-Boushehri, Sayed-Nader
Design of Settling Basins in Irrigation Network Using Simulation and Mathematical Programming, 1210

Shevchenko, S. V.
see Saltykov, L. S., 2117

Shi, Honglan
see Ding, Jie, 609

Shi, Jonathan J.
see Yang, Lei, 362

Shi, Peng
Regional Frequency Analysis of Low Flow Based on L Moments: Case Study in Karst Area, Southwest China, 1093

Shi, Xiaoqing
see Wu, Jichun, 1079

Shield, Carol K.
see Cheng, Min-Yuan, 1714
see Vanevenhoven, Linda M., 1663

Shields, F. Douglas
Aquatic Habitat Bottom Classification Using ADCP, 978

Shimizu, H.
see van de Lindt, John W., 1732

Shin, Doyun
see Moon, Hee Sun, 666

Shin, Moochul
see Andrawes, Bassem, 102

Shin, Sung Woo, Ph.D.
Effect of Concrete Compositions in Energy Transmission of Surface Waves for Nondestructive Crack Depth Evaluation, 1425

Shin, Sungwon, Ph.D.
see Suzuki, Takayuki, Ph.D., 2059

Shing, P. B.
see Stavridis, Andreas, 1635

Shinneeb, A.-M.
see Roussinova, Vesselina, 956

Shinozuka, Masanobu
see Soyoz, Serdar, 469

Shiotani, Tomoki
see Aggelis, Dimitrios G., 547

Shirazi, Ali
see Li, Li, 13

Shizhong, Qiang
see Huawen, Ye, 237

Shon, Chang-Seon
see Ye, Dan, 1418

Shoup, Donald
Putting Cities Back on Their Feet, 1942

Showkati, H.
Experiments on the Buckling Behavior of Ring-Stiffened Pipelines under Hydrostatic Pressure, 505

Shrestha, Rajesh R.
Fuzzy Nonlinear Regression Approach to Stage-Discharge Analyses: Case Study, 1060

Shrestha, Reena Amatya, Ph.D.
see Pham, Thuy Duong, 696

Shrivastava, Rakesh Kumar
see Gupta, Ajay Kumar, 647

Shrive, Nigel G.
see Choi, Kyoung-Kyu, 256

Shrive, Penelope L.
see Choi, Kyoung-Kyu, 256

Shu, Xiang
see Huang, Baoshan, 1416
see Huang, Baoshan, 1468
see Huang, Baoshan, ed., 2267

Shuai, Zhao
see Guo-zhong, Li, 1364

Shukla, K. K.
see Pandey, Ramesh, 39

Shukla, S. K.
Analytical Model for Fiber-Reinforced Granular Soils under High Confining Stresses, 1448
see Singh, S., 24

Shuster, Laurie A.
Doing Business the Right Way, 2196
Greener Roads Ahead, 2210

Shuster, William D.
see Abi Aad, Maya P., 1099

Sia, Angelia
see Wong, Nyuk Hien, 1953

Siddiqui, A. M.
see Sajid, M., 47

Siddiqui, Nadeem A., Ph.D.
see Alsayed, Saleh H., Ph.D., 195
see Alsayed, Saleh H., 244

Sideris, Kosmas K.
see Georgiadis, Aggelos S., 1379

Siedel, Heiner
Historic Building Stones and Flooding: Changes of Physical Properties due to Water Saturation, 1542

Siegel, Ryan
see Ergas, Sarina J., P.E., 733

Sigmon, Gregory, P.E.
see Liu, Zhugang "Amos", P.E., 2224

Siino, M.
see Gordaninejad, F., 1619

Sillanpää, M.
see Tuutijärvi, T., 712

Sillanpää, Mika
see Pham, Thuy Duong, 696

Silva dos Santos, Ana Paula, D.Sc.
High-Pressure Isotropic Compression Tests on Fiber-Reinforced Cemented Sand, 861

Silva, J.
Recycled Red-Clay Ceramic Construction and Demolition Waste for Mortars Production, 1366

Silverstein, Joann
see Bielefeldt, Angela, 695

Silvestre, J. Dinis
Inspection and Repair of Ceramic Tiling within a Building Management System, 1344

Simcock, Robyn, Ph.D.
see Voyde, Emily, 1095

Simiu, E.
see Filliben, J. J., 1622
see Gabbai, R. D., 1617

Simiu, Emil
see Coffman, Bradley F., 1681
see Duthinh, Dat, 1640

Simmons, David A.
see Gasparini, Dario A., 1514

Simmons, O. D.
see Hathaway, J. M., 763

Simmons, Stephen M.
Monitoring Suspended Sediment Dynamics Using MBES, 945

Simms, P., P. Eng.
see Fisseha, B., 939

Simões, Maria de Lurdes
Modeling and Simulation of Traffic Movements at Semiactuated Signalized Intersections, 1847

Simon, Jessica
Seismic Response and Fragility of Deteriorated Reinforced Concrete Bridges, 1733

Simonovic, Slobodan P.
see Eum, Hyung-Il, 1133
see Shrestha, Rajesh R., 1060
see Vasan, A., 1987

Simpson, Angus R.
see Wu, Wenyan, 1974
see Wu, Wenyan, 2015
see Zecchin, Aaron C., 1018

Simundic, Goran, M.S.
see Bosiljkov, Vlatko, Ph.D., 1665

Singer, Philip C.
see Boyer, Treavor H., 736

Singh, A. K.
see Shukla, S. K., 1448

Singh, A. V.
see Kandasamy, S., 42

Singh, Abhishek
Image-Based Machine Learning for Reduction of User Fatigue in an Interactive Model Calibration System, 283
see Nicklow, John, 2001

Singh, Amarjit
Leadership Flexibility Space, 1333
see Devlin, M. Scott, 2072
see Foley, Michael J. H., 1309
see Genadio, Frank, 2065
see Goto, Dustin, 1310

Singh, Bhagat
Effect of Welding on the Slip Damping of Layered and Jointed Structures, 550

Singh, Bhrigu N.
see Pandit, Mihir K., 40

Singh, D. N.
see Rao, B. Hanumantha, 847
see Shanthakumar, S., 1389

Singh, Jai Karan
see Sadeghi, Seyed Hamidreza, 1160

Singh, K. Lakshman
see Kumar, Praveen, 1452

Singh, Kripa S.
see Bhattacharyya, Debraj, 678
see Bhattacharyya, Debraj, 2125

Singh, L.
see Lamptey, G., 1834

Singh, M. K.
Development of a Practical Method for the Estimation of Maximum Lateral Displacement in Large Landfills, 2099

Singh, Mamata R.
Addressing Sustainability in Benchmarking Framework for Indian Urban Water Utilities, 1171

Singh, Mritunjay Kumar
Analytical Solution for Two-Dimensional Solute Transport in Finite Aquifer with Time-Dependent Source Concentration, 590

Singh, Premlata
see Singh, Mritunjay Kumar, 590

Singh, Purnendu N.
Sustainable Root Zone Salinity and Shallow Water Table in the Context of Land Retirement, 1232

Singh, S.
Can Soil Arching Be Insensitive to ϕ?, 24

Singh, Surjeet
Water Table Fluctuation in the Presence of a Time-Varying Exponential Recharge and Depth-Dependent ET in a Two-Dimensional Aquifer System with an Inclined Base, 1255

Singh, Sushil K.
Diagnostic Curves for Identifying Leaky Aquifer Parameters with or without Aquitard Storage, 1204
Generalized Analytical Solutions for Groundwater Head in Inclined Aquifers in the Presence of Subsurface Drains, 1221
Modeling the Transient Pumping from Two Aquifers Using MODFLOW, 1231
Simple Method for Quick Estimation of Leaky-Aquifer Parameters, 1217

Singh, V. P.
see Patil, S., 1073
see Patil, S., 1115
see Patil, S., 1157

Singh, Varun, Ph.D.
Web-Based Advanced Traveler Information System for Developing Countries, 1878

Singh, Vijay P.
see Afzalimehr, Hossein, 1080
see Afzalimehr, Hossein, 1127
see Afzalimehr, Hossein, 1142
see Moramarco, Tommaso, 7
see Moramarco, Tommaso, 1141
see Motamedi, Artemis, 1082
see Motamedi, Artemis, 1145
see Singh, Mritunjay Kumar, 590

Singhal, Gaurav
Reliability Assessment for Operational Wave Forecasting System in Prince William Sound, Alaska, 2060

Sinha, K. C.
see Lamptey, G., 1834

Sinha, Kumares C.
see Anastasopoulos, Panagiotis Ch., 1189
see Bhargava, Abhishek, 434

Sinske, Alexander
see Raad, Darian, 2019

Sirigiripet, Sunil K.
see Saride, Sireesh, Ph.D., 1409

Sitar, Nicholas
see Al Atik, Linda, 903

Sitharam, T. G., Ph.D.
see Samui, Pijush, 30

Sivakugan, N.
see Shukla, S. K., 1448
see Singh, S., 24

Sivakugan, Nagaratnam
see Lovisa, Julie, 31

Sivakumar Babu, G. L.
Prediction of Long-Term Municipal Solid Waste Landfill Settlement Using Constitutive Model, 2110
Reliability Analysis of Earth Dams, 872
see Basha, B. Munwar, 112

Skibniewski, Miroslaw J.
see Ryoo, Boong Yeol, 281
see Tserng, H. Ping, 334
see Yu, Wen-der, 265

Skibniewski, Miroslaw J., Ph.D.
see Golden, Sabrina K., Ph.D., 1334
see Yuan, Jingfeng, Ph.D., 1326

Skiffington, Mark A.
see Hanna, Awad S., 338

Škifić, Jerko
Nonconservative Formulation of Unsteady Pipe Flow Model, 993

Skitmore, Martin
see Creedy, Garry D., 367
see Guo, H. L., Ph.D., 1321

Skolnik, Derek A.
Critical Assessment of Interstory Drift Measurements, 1760

Skourup, Brian N.
see Erdogmus, Ece, 1564

Slagley, Jeremy M.
see Badiru, Adedeji B., 1586

Slatton, K. Clint
see Kennedy, Andrew B., 2033

Slavin, Lawrence M., Ph.D.
Parametric Dependency and Trends of HDD Pull Loads, 1569

Slisenko, V. I.
see Saltykov, L. S., 2117

Slížková, Zuzana
see Barták, Jiří, 1545

Small, Christopher
see Gorokhovich, Yuri, 1560

Small, Mitchell
see Xu, Jianhua, 1980

Smith, Brian L.
see Zhang, Guimin, 268

Smith, Charles J.
see Grubb, Dennis G., 875
see Grubb, Dennis G., 876

Smith, Daniel P.
New Approach to Evaluate Pollutant Removal by Storm-Water Treatment Devices, 653

Smith, David A.
see Badiru, Adedeji B., 1586

Smith, David W.
see Bianchini, Alessandra, 1807

Smith, Dru
see Soler, Tomás, 1780

Smith, Ian
see Winkel, Michael, 1689

Smith, Ian F. C.
see Goulet, James-A., 1736
see Saitta, Sandro, 262

Smith, James A.
see Javier, Julie Rose N., 1058
see Ottmar, Karl J., P.E., 638

Smith, Michelle M.
see Miller, John S., P.E., 1952

Smith, P. P.
Building Robustness Research during World War II, 1549

Smith, Scott T.
Behavior and Effectiveness of FRP Wrap in the Confinement of Large Concrete Cylinders, 234
see Khomwan, Nantawat, 247
see Kim, Seo Jin, 217

Smout, I. K.
see Pérez Urrestarazu, L., 1253

Smyth, Andrew
see Franco, Guillermo, 2078

Snay, Richard
see Pearson, Chris, 1776

Snijder, H. H.
see Maljaars, J., 1612

Snyder, R. L.
see Song, Z. W., 1226

Soar, P. J.
see Clifford, N. J., 1050

Soares, C. Guedes
see Rusu, Eugen, 2032

Soares F., Secundino
see Hidalgo, Ieda G., Ph.D., 456

Soares-Frazão, S.
see Petaccia, G., 970

Sobanjo, John, P.E.
Reliability-Based Modeling of Bridge Deterioration Hazards, 158
see Tawfiq, Kamal, Ph.D., P.E., 1412

Sobczyk, Kazimierz
Fatigue Reliability of Multidimensional Vibratory Degrading Systems under Random Loading, 477

Soccodato, F. M.
see Callisto, L., 807

Soetens, F.
see Maljaars, J., 1612

Soga, K., Ph.D.
see Leung, Y. F., 805
see Leung, Y. F., 937

Soga, Kenichi
see Joshi, Kaushal, 829

Soibelman, Lucio
see Peña-Mora, Feniosky, 289

Sokollek, Volker
see Melchior, Stefan, 705

Solanki, Pranshoo
see Zaman, Musharraf, 12

Soldini, Luciano
see Lorenzoni, Carlo, 2036

Soler, Tomás
Rigorous Estimation of Local Accuracies, 1780

Solomatine, Dimitri
see Alfonso, Leonardo, Ph.D., 1963
see Barreto, Wilmer, 2014

Somensi, Cleder A.
see Corrêa, Albertina X. R., 613

Somieski, Anna
see Hirt, Christian, 1766

Sommer, Rolf
Correspondence between the Campbell and van Genuchten Soil-Water-Retention Models, 1262

Sonebi, Mohammed
Optimization of Cement Grouts Containing Silica Fume and Viscosity Modifying Admixture, 1377

Song, C. R.
Hydraulic Property Estimation Using Piezocone Results, 818

Song, Fei
see Zhang, Jian-Min, 873

Song, Gangbing, Ph.D., ed.
Earth and Space 2010: Engineering, Science, Construction, and Operations in Challenging Environments, 2236

Song, Hwayeon
see Osouli, Abdolreza, 781

Song, Jianwei
see Lee, George C., 1658

Song, Jongchul
see Bogus, Susan M., 1169

Song, Ng Yew
see Rahardjo, Harianto, 924

Song, Qing
Effect of Water Addition Frequency on Oxygen Consumption in Acid Generating Waste Rock, 691

Song, Xiaobin, Ph.D.
Stability Capacity and Lateral Bracing Requirements of Wood Beam-Columns, 1628
Stability Capacity of Metal Plate Connected Wood Truss Assemblies, 1679

Song, Yuanbin
see Chua, David K. H., 378

Song, Z. W.
Distribution and Trends in Reference Evapotranspiration in the North China Plain, 1226

Songlai, Chen
Experimental Study on Full-Scale Light Frame Wood House under Lateral Load, 1687

Sorbino, Giuseppe
see Cascini, Leonardo, 782

Sotelino, Elisa D.
see Harris, Devin K., 159

Sotiropoulos, F.
see Radspinner, R. R., 1045

Sotiropoulos, Fotis
see Paik, Joongcheol, 1046
see Parsheh, Mehran, 982

Soubra, Abdul-Hamid
see Mollon, Guilhem, 794

Soudki, Khaled
see Badawi, Moataz, 208
see Czaderski, Christoph, 222

Soule, Nathan C., P.E., P.G.
see Henn, Raymond W., Ph.D., P.E., 2292

Sousa, Joaquim José de Oliveira
see Cunha, Maria da Conceição, 1982

Soyoz, Serdar
Structural Reliability Estimation with Vibration-Based Identified Parameters, 469

Spada, Mario
see Bertolini, Luca, 1411

Sparks, Leon
see Sharif, Hatim O., 1120

Sparks, S. Patrick, P.E.
Ironclad, 2204

Spaulding, Malcolm L., Ph.D., P.E., ed.
Estuarine and Coastal Modeling, 2241

Spence, Joshua
see Chopra, Manoj, 1098

Spencer, B. F.
see Chen, Y., 1747
see Linderman, Lauren E., 601

Spencer, Billie F., P.E.
see Nakata, Narutoshi, 478

Sperb, Rafael M.
see Corrêa, Albertina X. R., 613

Spies, R. E.
see Vardanega, P. J., 1391

Spiliopoulou, Anastasia D.
Toll Plaza Merging Traffic Control for Throughput Maximization, 1796

Spinella, Nino
Simple Plastic Model for Shear Critical SFRC Beams, 1647

Spinewine, Benoit
see Sequeiros, Octavio E., 987

Sreekrishnan, T. R.
see Goyal, Radha, 2123

Sridhar, V.
Estimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhills, 1064

Sridhar, Venkataramana
see You, Jinshing, 1076

Sritharan, Sri
see AbdelSalam, Sherif S., 166
see Henry, Richard S., 481
see Suleiman, Muhannad T., 910
see Wotherspoon, Liam M., 139

Srivastava, Amit
see Babu, G. L. Sivakumar, 1565
see Sivakumar Babu, G. L., 872

Srivastava, Ankit
Quantitative Structural Health Monitoring by Ultrasonic Guided Waves, 551

Stahnke, Graham
see Schnabel, William E., 171

Staley, Brian
see Rens, Kevin L., Ph.D., P.E., 2133

Stamatiadis, Nikiforos, P.E.
Practical Solution Concepts for Planning and Designing Roadways, 1820

Stander, Emilie K.
Hydraulic Test of a Bioretention Media Carbon Amendment, 1109

Stang, Henrik
see Nielsen, Jens Henrik, Ph.D., 1359

Stansby, Peter K.
see Cuthbertson, Alan J. S., 5

Stanton, John F.
see Pang, Jason B. K., 116

Starek, Michael
see Kennedy, Andrew B., 2033

Stark, Timothy D., Ph.D., P.E.
Is Construction Blasting Still Abnormally Dangerous?, 1311
Shear Strength in Preexisting Landslides, 868
see Calder, G. Vincent, Ph.D., 2126
see Reddy, Krishna R., 2100

Starossek, Uwe, P.E.
Disproportionate Collapse: Terminology and Procedures, 1548

Starr, Paul, P.E., Ph.D., CEng
Containing the Constraints, 2190

Stathopoulos, Antony
see Tsekeris, Theodore, 1853

Stathopoulos, Ted
see Zisis, Ioannis, 1723

Stavridis, Andreas
Finite-Element Modeling of Nonlinear Behavior of Masonry-Infilled RC Frames, 1635

Stedinger, Jery R.
see Shaw, Stephen B., 630

Steets, J.
Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. I: Theory, 1864
Multibody Dynamics Approach to the Modeling of Friction Wedge Elements for Freight Train Suspensions. II: Applications, 1865

Stefan, Lucian
Multicriteria Capacity Envelopes for Biaxial Bending of Concrete Hydraulic Structures, 1710

Stefano, Piana
see Francesca, Ventura, 1208

Stegemann, Julia A.
see Leonard, Sunday A., 764

Stein, Stuart M., P.E., ed.
TMDLs in the Urban Environment: Case Studies, 2288

Steinberg, Eric, Ph.D., P.E.
Structural Reliability of Prestressed UHPC Flexure Models for Bridge Girders, 100

Steinert, Bernd
see Melchior, Stefan, 705

Stenstrom, Michael K.
see Jiang, Pan, 743

Sterle, Oskar
see Marjetič, Aleš, 1778

Stevens, Benjamin E.
see Gutierrez-Wing, Maria T., 693

Stevenson, Joanne
see Flint, Courtney G., 2090

Stewart, Dave
Estimating an Impedance-to-Flow Parameter for Flood Peak Prediction in Semiarid Watersheds, 1074

Stewart, Jonathan P.
see Lemnitzer, Anne, 936
see Shamsabadi, Anoosh, 123

Stiros, Stathis C.
Identification of Nearshore Wave Characteristics Using Robotic Total Stations, 1787

Stöckle, Claudio
see Sommer, Rolf, 1262

Stockstill, Richard L.
see de Béjar, Luis A., 1013

Stoddard, Andrew
see Xia, Meng, 725

Stoesser, T.
Physically Realistic Roughness Closure Scheme to Simulate Turbulent Channel Flow over Rough Beds within the Framework of LES, 1026
Turbulent Flow through Idealized Emergent Vegetation, 1048

Stoesser, Thorsten
see Kim, Dongjin, 611

Stone, A.
Design and Costs for Simple-Made-Continuous Rolled Steel Girder Bridges: Literature Survey, 2153

Stone, Alex
see van de Lindt, John W., 2158

Stone, Mark
see Chen, Dong, 1025

Stopar, Bojan
see Marjetič, Aleš, 1778

Storesund, Rune, D.Eng., P.E., G.E.
Simulated Wave-Induced Erosion of the Mississippi River–Gulf Outlet Levees during Hurricane Katrina, 2045

Storm, Richard, P.E.
see Isebrands, Hillary N., P.E., 1891

Stormont, John C.
see Tarefder, Rafiqul A., 1829

Stovin, Virginia
Dimensionless Method to Characterize the Mixing Effects of Surcharged Manholes, 975

Strand, R. J.
see Clemmens, A. J., 1249
see Clemmens, A. J., 1250
see Clemmens, A. J., 1251
see van Overloop, P. J., 1281

Stratford, T. J.
see Chen, J. F., 189

Stratton, Stephen C.
see Palumbo, James E., 741

Straub, Daniel
Bayesian Network Enhanced with Structural Reliability Methods: Methodology, 583
Bayesian Network Enhanced with Structural Reliability Methods: Application, 584

Strauss, Alfred
Assessment of Existing Structures Based on Identification, 1614

Street, Robert L.
see MacWilliams, Michael L., 1051

Streeter, Donald
see Subramaniam, Kolluru V., 105

Strelkoff, T. S.
see Bautista, E., 1276

Strelkoff, Theodor S.
see Perea, Hugo, 1241

Stringam, Blair L.
Design of a Single-Pool Downstream Controller Using Quantitative Feedback Control Theory, 1275

Strom, K. B.
Comparison of Automated Image-Based Grain Sizing to Standard Pebble-Count Methods, 991

Strom, Peter F.
see Tsai, Ching-Ling, 708

Strong, Shawn D.
see Gebken, Richard J., 1594

Struck, Scott, Ph.D., ed.
Low Impact Development 2010: Redefining Water in the City, 2262

Struck, Scott D.
see Selvakumar, Ariamalar, 623

Strzepek, Kenneth
see Block, Paul, 1975
see Chinowsky, Paul S., 1181

Stuedlein, Armin W., Ph.D., P.E.
Design and Performance of a 46-m-High MSE Wall, 851
Shear-Wave Velocity Correlations for Puyallup River Alluvium, 901

Sture, Stein
see Arslan, Haydar, 46

Su, Cheng
Aerostatic Reliability Analysis of Long-Span Bridges, 119

Su, Li-jun
see Wang, Tie-hang, 172

Su, Mu-Chun
see Chen, Jieh-Haur, 432

Su, Ning-Fen
see Fu, Jing-Li, 2134

Su, Weizhong
Assessing the Impact of Land Use/Land Cover on Urban Heat Island Pattern in Nanjing City, China, 1957

Su, Xiaogang, Ph.D.
see Harb, Rami, Ph.D., P.E., 1900

Suárez, Benjamín
see Carbonell, Josep Maria, 504

Suárez, Martín C. Giménez
see Rodríguez, José L. García, 1128

Subramaniam, Kolluru
see Nian, Weimin, 59

Subramaniam, Kolluru V.
Influence of Early Temperature Rise on Movements and Stress Development in Concrete Decks, 105

Subramanian, S. Bala
SSPRSD Using a Filamentous Fungal Strain *Penicillium expansum BS30* Isolated from Wastewater Sludge, 694
see Yan, Song, 2096

Sudhakar, Yedla
Competitive Sorption of Pesticides onto Treated Wood Charcoal and the Effect of Organic and Inorganic Parameters on Adsorption Capacity, 732

Sugimoto, Mitsutaka
Stack Pipe Model for Pipe Jacking Method, 382

Suh, Kwangsuk
Effective Repair for Corrosion Control Using FRP Wraps, 215

Suidan, Makram T.
see Abi Aad, Maya P., 1099

Sukhodolov, Alexander N.
Assessment of a River Reach for Environmental Fluid Dynamics Studies, 1034
Case Study: Effect of Submerged Aquatic Plants on Turbulence Structure in a Lowland River, 988

Sukhodolova, Tatiana A.
see Sukhodolov, Alexander N., 988

Suleiman, Muhannad T.
Behavior of Driven Ultrahigh-Performance Concrete H-Piles Subjected to Vertical and Lateral Loadings, 910
see AbdelSalam, Sherif S., 166
see Mekkawy, Mohamed M., Ph.D., 1511

Sumanasooriya, Milani
see Deo, Omkar, 1424

Summers, R. Scott, Ph.D.
see Zachman, Bradley A., 631

Sun, Bohua
Closed-Form Solution of Axisymmetric Slender Elastic Toroidal Shells, 586

Sun, Carlos C., P.E.
Dynamic Incident Progression Curve for Classifying Secondary Traffic Crashes, 1912

Sun, Huiming
Kaolinite and Lead in Saturated Porous Media: Facilitated and Impeded Transport, 756

Sun, Jian, Ph.D.
see Xu, Hongfeng, Ph.D., 1906

Sun, Jianliang
see Wei, Zaishan, 768

Sun, Liecheng, P.E.
Application of the Analytical Strip Method to Antisymmetric Laminates, 588

Sun, Lishan
Measuring Transfer Efficiency of Urban Public Transportation Terminals by Data Envelopment Analysis, 1951

Sun, Manyi
see Chen, Zhangfusheng, 496

Sun, Mingzheng
see Chen, Xumei, 1885

Sun, Peijiang
see Wu, Hwai-Chung, 1405

Sun, Tao
see Sequeiros, Octavio E., 987

Sun, Y. J.
see Cheng, Y. M., 883

Sun, Yiyan
see Ma, Yuxiang, 467

Sun, Yung-Ming, Ph.D.
Service Life Prediction for Concrete Structures by Time-Depth Dependent Chloride Diffusion Coefficient, 1477

Sun, Z. W.
see Cong, P. C., 52

Sun, Ze-Yang
see Wu, Gang, 1462

Sundar, V.
see Krishnakumar, C., 2034

Sundararajan, T.
see Jayakumar, S., 1440

Suneel Kumar, M.
Interplanar and Intraplanar Differential Settlement Analyses of Boiler Supporting Structure: Comparative Study, 2138

Sung, W. P.
see Wu, Y. L., 2121

Surampalli, R. Y.
see Bhunia, Puspendu, 2112
see Chien, H. Y., 681
see Kao, C. M., 615
see Subramanian, S. Bala, 694

Surampalli, Rao Y., ed.
see Khanal, Samir K., ed., 2228
see Lin, C. E., 2111
see Tsai, T. T., 642
see Yan, Song, 2096

Sutherland, Kenneth
see Joshi, Kaushal, 829

Suzuki, Ichiro
see Sahabi, Danladi M., 668

Suzuki, Takayuki, Ph.D.
Spatiotemporal Characteristics of Near-Bed Pressure Gradients on a Barred Beach, 2059

Swallow, Peter
see Khaitan, Sameer, 726

Swan, Nathan D.
see Thoma, Eben D., 700

Swarbrick, Gareth E., Ph.D.
see Hanson, James L., Ph.D., P.E., 169

Sweeney, Matthew, P.E.
Clearing the Utilities on Time and Under Budget, 2064

Sweeney, Robert A. P., Ph.D., P.Eng.
Bridge Inspection Practice: Two Different North American Railways, 136

Sweis, Ghaleb J.
see Abu Hammad, Ayman A., 1327

Sweis, Rateb J.
see Abu Hammad, Ayman A., 1327

Swenty, Matthew K., P.E.
see Belarbi, Abdeldjelil, P.E., 1515

Swiecki, Wilfred
see Canale, Raymond P., 2017

Syed, Mohiuddin
see Natarajan, C., 1524

Sýkora, Miroslav
see Holický, Milan, 1539

Syntzirma, Despina V., M.Sc.
Load-History Effects on Deformation Capacity of Flexural Members Limited by Bar Buckling, 1606

Szurgot, Andrew
see Bahor, Brian, Q.E.P., 697

Tabaković, Amir
Influence of Recycled Asphalt Pavement on Fatigue Performance of Asphalt Concrete Base Courses, 1413

Tabari, Hossein
see Sabziparvar, Ali-Akbar, Ph.D., 1279

Tabatabai, H.
see Hawileh, R., 1347

Taber, Lawrence H., P.E.
see Belarbi, Abdeldjelil, P.E., 1515

Taciroglu, Ertugrul
see Lemnitzer, Anne, 936
see Shamsabadi, Anoosh, 123

Tada, Keitarou
see Hashimoto, Toshikazu, 711

Tadros, Maher
see Erdogmus, Ece, 1564

Tadros, Maher K., Ph.D., P.E.
see Badie, Sameh S., Ph.D., P.E., 140

Taeibi-Rahni, M.
Low-Dimensional Proper Orthogonal Decomposition Modeling as a Fast Approach of Aerodynamic Data Estimation, 43

Taerwe, Luc
see Tao, Jin, 1455

Taflanidis, Alexandros A.
Reliability-Based Design Using Two-Stage Stochastic Optimization with a Treatment of Model Prediction Errors, 603

Taghon, Gary L.
see Fries, J. Stephen, 965

Taha, Mahmoud M. Reda
see Choi, Kyoung-Kyu, 256

Taha, Ramzi A., Ph.D.
see Alnuaimi, Ali S., Ph.D., 375

Taheriyoun, Masoud
see Karamouz, Mohammad, 1291

Taiebat, Mahdi
Simple Yield Surface Expressions Appropriate for Soil Plasticity, 29

Tait, S. J., Ph.D.
see Schellart, A. N. A., Ph.D., 986

Tait, Simon
see Tregnaghi, Matteo, Ph.D., 964

Takagi, K.
see Chien, H. Y., 681

Takamatsu, Masatsugu
Hydraulic Model for Sedimentation in Storm-Water Detention Basins, 672

Takeda, Minoru
see Sahabi, Danladi M., 668

Täljsten, Björn
see Schmidt, Jacob W., 216

Tam, C. M.
see Wong, C. K., 425

Tamayol, A.
Hydrodynamics of Secondary Settling Tanks and Increasing Their Performance Using Baffles, 612

Tan, Alex Yong Kwang
see Wong, Nyuk Hien, 1953

Tan, F. Hadipriono
see Al-Humaidi, H. M., 1502

Tan, Guangming
see Fu, Xiang, 1122

Tan, John, P.E.
see Haas, Julius, P.E., 2219

Tan, Puay Yok
see Wong, Nyuk Hien, 1953

Tan, Xiangyang
Automated Code Compliance Checking for Building Envelope Design, 280

Tan, Yong
Semiempirical Approach for Estimation of DDC-Induced Deflections of Sheet Pile Walls in Peat, 1504

Tan, Yongtao
Contractors' Competition Strategies in Bidding: Hong Kong Study, 420

Tandalam, Arjun
Reynolds Number Effects on the Near-Exit Region of Turbulent Jets, 1006

Tang, Alex K., P.E., ed.
Kashiwazaki, Japan, Earthquake of July 16, 2007: Lifeline Performance, 2261
Pisco, Peru, Earthquake of August 15, 2007: Lifeline Performance, 2269

Tang, Chao-Wei
Radial Basis Function Neural Network Models for Peak Stress and Strain in Plain Concrete under Triaxial Stress, 1447
see Chen, How-Ji, 1408

Tang, Jia-Yu
see Fu, Jie, 758

Tang, L. C. M.
Entropic Risk Analysis by a High Level Decision Support System for Construction SMEs, 270

Tang, Man-Chung, Dr.-Ing., P.E.
The Story of World Record Spans, 2171

Tang, Wilson H.
see Zhang, J., 783

Tangchirapat, Weerachart
Use of High Fineness of Fly Ash to Improve Properties of Recycled Aggregate Concrete, 1404

Tannert, Thomas, Ph.D.
Strength Prediction for Rounded Dovetail Connections Considering Size Effects, 494

Tanovic, Rusmir
see Kim, Yail J., 165

Tansel, B.
see Lagos, L., 2119

Tao, Jin
Compressive Strength of Self-Compacting Concrete during High-Temperature Exposure, 1455

Tao, Mingjiang
Application of Shakedown Theory in Characterizing Traditional and Recycled Pavement Base Materials, 1813

Tao, Yuanyuan
see Yu, Jianying, 1430

Tao, Zhang
Vibration Analysis of an Elastic Beam Subjected to a Moving Beam with Flexible Connections, 471

Taramini, Vincent
see Babilotte, Antoine, 701

Tarefder, Pafiqul A., Ph.D.; P.E., ed.
Pavements and Materials: Testing and Modeling in Multiple Length Scales, 2266

Tarefder, Rafiqul A.
Determining Hardness and Elastic Modulus of Asphalt by Nanoindentation, 22
Evaluation of Subgrade Strength and Pavement Designs for Reliability, 1829
Nanoscale Evaluation of Moisture Damage in Polymer Modified Asphalts, 1421

Tarjuelo, J. M., Ph.D.
see Moreno, M. A., Ph.D., 1246

Task Committee on Blast-Resistant Design of the Petrochemical Committee of the Energy Division of ASCE
Design of Blast-Resistant Buildings in Petrochemical Facilities, 2234

Tassoulas, John L.
see Nguyen, Hieu H., 101
see Vásquez, L. F. Gonzalo, 886

Tastani, S. P.
Direct Tension Pullout Bond Test: Experimental Results, 1680

Tavakolifar, Hamed
see Karamouz, Mohammad, 1291

Tawfik, Ahmed
see Mahmoud, Mohamed, 644

Tawfiq, Kamal, Ph.D., P.E.
Effect of Construction Induced Vibrations on Green Concrete in Drilled Shafts, 1412

Taylor, John E.
see Di Marco, Melissa K., 1329
see Wong, Kenny, 358

Tazoh, T.
see Giannakou, A., 891

Tchir, W. J.
see Botros, K. K., 1562

Teatini, P.
see Paris, A., 1144

Tedd, Paul
see Joshi, Kaushal, 829

Teizer, Jochen
see Bohn, Jeffrey S., 377

Tejedor, M. Isabel
see Muñoz, Jose F., 1350

Templeton. J. S., Dr. of Eng., P.E., ed.
Offshore Technology in Civil Engineering: Hall of Fame Papers from the Early Years, 2265

Tena-Colunga, Arturo
Simplified Method for the Seismic Analysis of Masonry Shear-Wall Buildings, 1659

Teng, J. G.
see Chen, G. M., 227
see Xiao, Q. G., 201
see Yu, T., 1646
see Zhang, L., 220

Teng, Jiangming
see Wu, Hwai-Chung, 1405

Teng, Michelle H.
see Zhou, Hongqiang, 510

Tenkhoff, Brian
see Al-Ostaz, Ahmed, 1354

Tenorio, G.
see Martín-Lara, M. A., 766

Teomete, Egemen
Structural Analyses and Assessment of Historical Kamanlı Mosque in Izmir, Turkey, 1531

Teplý, Břetislav
see Vořechovská, Dita, 1553

Terazawa, Masato
see Aggelis, Dimitrios G., 547

Terzić, Anja M.
Application of Results of Nondestructive Testing Methods in the Investigation of Microstructure of Refractory Concretes, 1439

Tescione, Domenico
see Borrelli, Rosario, 72

Testik, Firat Y.
see Malek-Mohammadi, Siamak, 2055

Thakur, Pramod Kumar
see Indraratna, Buddhima, 26

Thal, Alfred E.
Estimation of Cost Contingency for Air Force Construction Projects, 431

Thangayah, Tamilselvan
see Hlaing, Myat Marlar, 1491

Theegala, Chandra S.
see Gutierrez-Wing, Maria T., 693

Thepadia, Mayank
see Martinez, Christopher J., 1254

Thevanayagam, S., P.E.
see El Shamy, U., P.E., 32

Thimus, Jean Francois
see Hadjab, Hadda, 1473

Thoma, Eben D.
Development of EPA OTM 10 for Landfill Applications, 700

Thomas, H. Randolph
Quantification of Losses of Labor Efficiencies: Innovations in and Improvements to the Measured Mile, 1302

Relief from Bid Mistakes, 1304

Thomas, Marlin U.
Models for Managing Contingency Construction Operations, 353

Thomas, Robert J.
see Oh, HyungSeon, 450

Thompson, Anita
see Nimmer, Mike, 1152

Thompson, Lucas
see O'Rourke, Michael J., 77

Thompson, Paul
see Fu, G., 2129

Thomson, Peter
see Moncayo, Hever, 49

Thornton, Christopher I., P.E.
see Pierce, Michael W., 1090

Thyagaraj, T.
Influence of Osmotic Suction on the Soil-Water Characteristic Curves of Compacted Expansive Clay, 938

Tian, Hong-qi
see Liu, Tang-hong, 1879

Tian, Runli
see Lv, Pengmin, 475

Tian, Yuan
see Sun, Huiming, 756

Tian, Zongzhong, ed.
see Mao, Baohua, ed., 2289

Tidwell, Vincent C.
see Fernald, Alexander G., 1289

Tiepo, Erasmo N.
see Corrêa, Albertina X. R., 613

Tills, Jamie
see Alahmad, Mahmoud, P.E., 90

Timmons, Terry
see Ding, Jie, 609

Ting, Francis C. K.
see Havaldar, Sanjay N., 543

Tiong, Robert L. K.
see Zheng, Sha, 406

Tjhin, Tjen
see Park, Jung-Woong, 1627

To, Lam G.
see Gutkowski, Richard M., 1677

Todey, Dennis
see You, Jinshing, 1076

Tolaymat, Thabet M.
see Bareither, Christopher A., 706
see Barlaz, Morton A., 707

Tolson, B. A.
see Kuta, R. W., 983

Tomazic, Saso
see Omerovic, Sanida, 1593

Tomirotti, Massimo
see Pilotti, Marco, 1014

Tommasi, Paolo
see Rotonda, Tatiana, 811

Tommelein, Iris D.
see Milberg, Colin T., 1507
see Tuholski, Stan J., Ph.D., S.E., 1331

Tompkins, Mark R.
see MacWilliams, Michael L., 1051

Tong, Xiandoing
see El-Tawil, Sherif, 2273

Tong, Zhao-Xia
Drained Deformation Behavior of Anisotropic Sands during Cyclic Rotation of Principal Stress Axes, 920

Toniolo, Horacio
Hydraulic and Sedimentological Characterizations of a Reach on the Anaktuvuk River, Alaska, 1040

Tonon, F.
Methods for Enlarging Transportation Tunnels while Keeping Tunnels Fully Operational, 2155

Tonon, Fulvio, ed.
Deep and Underground Excavations (GSP 206), 2232
see Youn, Heejung, Ph.D., 900

Toole, T. Michael
see Abowitz, Deborah A., 325

Toor, Shamas-ur-Rehman, Ph.D.
Positive Psychological Capital as a Source of Sustainable Competitive Advantage for Organizations, 348
What If You Have Been Retrenched? Look toward the Bright Side: Capitalize on Your Psychological Capital, 2071

Tootle, Glenn A.
see Barnett, F. Anthony, 1113

Torres, Juan, Ph.D.
Primary Schools' Territorial Policy and Active Commuting: Institutional Influences in Montreal and Trois-Rivières, 1948

Tort, Cenk, P.E.
Mixed Finite Element for Three-Dimensional Nonlinear Dynamic Analysis of Rectangular Concrete-Filled Steel Tube Beam-Columns, 592
Mixed Finite-Element Modeling of Rectangular Concrete-Filled Steel Tube Members and Frames under Static and Dynamic Loads, 1672

Touran, Ali
Probabilistic Approach for Budgeting in Portfolio of Projects, 350

Tournebize, Julien, Ph.D.
see Nédélec, Yves, Ph.D., 1223

Toutanji, H.
Behavior of Large-Scale Rectangular Columns Confined with FRP Composites, 182

Towhata, Ikuo
see Motamed, Ramin, 820

Townsend, Timothy G., Ph.D., P.E.
see Xu, Qiyong, Ph.D., P.E., 2118

Toy, Süleyman
Evaluation of 10-Year Temperature Differences between Urban and Rural Areas of a Well-Planned, Unindustrialized, and Medium-Sized Turkish Town, Erzincan, 1955

Trada, M.
see Ku, H., Ph.D., 1351

Trajkovic, Slavisa
Comparison of Simplified Pan-Based Equations for Estimating Reference Evapotranspiration, 1214

Tran, D. H.
Hydraulic Deterioration Models for Storm-Water Drainage Pipes: Ordered Probit versus Probabilistic Neural Network, 275

Tran, H. D.
Markov and Neural Network Models for Prediction of Structural Deterioration of Storm-Water Pipe Assets, 1180

Trani, Laricar Dominic O.
Assessment of Subballast Filtration under Cyclic Loading, 921
Use of Impedance Probe for Estimation of Porosity Changes in Saturated Granular Filters under Cyclic Loading: Calibration and Application, 916

Trapido, Marina, Ph.D.
see Goi, Anna, Ph.D., 614

Traver, Robert G.
see Batroney, Thomas, 1069

Travin, G.
see Kesserwani, G., 1010

Travis, Quentin B.
Correlation of Elastic Modulus and Permeability in Concrete Subjected to Elevated Temperatures, 1423
Unsaturated Infinite Slope Stability Considering Surface Flux Conditions, 869

Tregnaghi, Matteo, Ph.D.
Effect of Flood Recession on Scouring at Bed Sills, 964

Trejo, David, Ph.D., P.E.
see Kim, Young Hoon, Ph.D., 1705
see Mander, Thomas J., 142
see Pillai, Radhakrishna G., 1451

Trent, Whitney L.
see Rathje, Ellen M., Ph.D., 833

Treyssède, Fabien
see Basseville, Michèle, 495

Triana, Enrique
River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. I: Model Development and Calibration, 1977
River GeoDSS for Agroenvironmental Enhancement of Colorado's Lower Arkansas River Basin. II: Evaluation of Strategies, 1978

Triantafyllidis, Th.
see Wichtmann, T., 845

Triantis, Konstantinos
see Ozbek, Mehmet Egemen, 1164
see Ozbek, Mehmet Egemen, 1165

Trout, Kenneth E.
see Nilsson, Kenneth A., 1134

Trung, Le Hai
see Cáceres, Iván, 973

Truong, Q. Hung
see Lee, Changho, 1376

Tryby, Michael
see Propato, Marco, 2007

Tryby, Michael E.
Monitoring Design for Source Identification in Water Distribution Systems, 2024
see Mirghani, Baha Y., 306

Tsai, Ching-Ling
Effect of Forced Aeration and Mechanical Turning on Leachate Quantity and Quality from Glass Cullet Stockpiles, 708

Tsai, Christina W.
see Franceschini, Samuela, 1066

Tsai, Mu-Sen
see Ou, Yu-Chen, 1632

Tsai, T. T.
Treatment of TCE-Contaminated Groundwater Using Fenton-Like Oxidation Activated with Basic Oxygen Furnace Slag, 642

Tsai, Yi-Chang
Critical Assessment of Pavement Distress Segmentation Methods, 1789

Tsai, Yichang (James)
Vision-Based Roadway Geometry Computation, 1814

Tschegg, Elmar Karl
Nondeformability of Ventilated and Mortar-Embedded Marble Facade Panels, 1496

Tse, Kenny T. C.
see Lam, Patrick T. I., 295

Tsekeris, Theodore
Short-Term Prediction of Urban Traffic Variability: Stochastic Volatility Modeling Approach, 1853

Tseng, Kuo-Hung
see Lee, Hsien-Yi, 2097

Tseng, Ssu-Min
see Chou, Chien-Cheng, 311

Tserng, H. Ping
Developing an ARIS-House-Based Method from Existing Information Systems to Project-Based Enterprise Resource Planning for General Contractor, 334

Tu, Chin-Jung
see Chang, Shu-Chun, 2103

Tu, Yongqing
Damping Parameter Identification and Study of Metal Foam Filled Steel Tube, 1384

Tucci, C. E. M.
see Paz, A. R., 1072

Tuholski, Stan J., Ph.D., S.E.
Design Structure Matrix Implementation on a Seismic Retrofit, 1331

Tullis, B. P.
Slip-Lined Culvert Inlet End Treatment Hydraulics, 1202

Tung, Li-Wei (Chris)
see Lin, Liang-Tay, 1866

Tung, Yeou-Koung
see Duan, Huan-Feng, 2028

Turan, O. Tugrul
see Higgins, Christopher, 110
see Higgins, Christopher, 149

Turk, Goran
see Marjetič, Aleš, 1778

Turk, Sevkiye Sence, Ph.D.
see Berkoz, Lale, Ph.D., 1943

Türk, Tuğba
Adsorption of As(V) from Water Using Nanomagnetite, 656

Turkalj, Goran
see Brnic, Josip, 567

Türkel, Selçuk
Fresh and Hardened Properties of SCC Made with Different Aggregate and Mineral Admixtures, 1458

Türker, Temel
see Bayraktar, Alemdar, 1499

Turmo, José
Effect of Hanger Flexibility on Dynamic Response of Suspension Bridges, 602

Turner, Michelle
see Lingard, Helen, 433

Turtle, David
see Wu, Zheng Yi, 1970

Tutumluer, Erol, Ph.D.
see Anochie-Boateng, Joseph, Ph.D., 1465
see Huang, Baoshan, ed., 2267

Tutuncu, Ilker
see Mason, James A., 1561

Tuutijärvi, T.
Adsorption Mechanism of Arsenate on Crystal γ-Fe_2O_3 Nanoparticles, 712

Tyagi, R. D.
see Bhunia, Puspendu, 2112
see Khanal, Samir K., ed., 2228
see Subramanian, S. Bala, 694
see Yan, Song, 2096

Tzeng, Chwen-Jeng
see Jiang, Pan, 743

Uang, Chia-Ming
Cyclic Testing and Modeling of Cold-Formed Steel Special Bolted Moment Frame Connections, 1701
see Sato, Atsushi, 1702

Uber, James G.
see De Sanctis, Annamaria E., 2003

Uddin, N.
see Vaidya, A., 223

Uddin, Nasim, Ph.D.; P.E., ed.
Wind Storm and Storm Surge Mitigation, 2295

Uddin, Waheed
see Tarefder, Rafiqul A., 22

Uenishi, Koji
On a Possible Role of Rayleigh Surface Waves in Dynamic Slope Failures, 28

Ugarelli, Rita
Asset Management for Urban Wastewater Pipeline Networks, 1174
Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks, 1994

Uijttewaal, Wim
see Cáceres, Iván, 973

Uijttewaal, Wim S. J.
see Sukhodolov, Alexander N., 1034

Ummenhofer, Thomas
see Huawen, Ye, 237

Underwood, B. Shane
see Yun, Taeyoung, 1387

Unger, Jens
see Hager, Willi H., 1031

Unsal, Hakan
see Wong, Kenny, 358

Unsworth, John F., P.Eng.
see Sweeney, Robert A. P., Ph.D., P.Eng., 136

Upadhyay, A. K.
see Pandey, Ramesh, 39

Upadhyay, V.
see Singh, Mamata R., 1171

Upadhyaya, Shrini K.
see Saha, R., 1227

Ural, D. N.
see Sariyar, O., 1931

Urban Water Resources Research Council Gross Solid Technical Committee
Guideline for Monitoring Stormwater Gross Solids, 2252

Urgessa, Girum S.
Dynamic Response of Retrofitted Masonry Walls for Blast Loading, 542

Üstün, Haluk
see Benli, Bogachan, 1282

Vacca, Andrea
see Di Cristo, Cristiana, 943

Vaccari, David A.
see Jagupilla, Sarath Chandra K., 687

Václavek, Leo
Safety Assessment of a Steel Frame Using LRFD and SBRA Methods, 2136

Vadillo, G.
see Loya, J. A., 525

Vadodaria, Ghanshyam P.
see Chahar, Bhagu R., 1206

Vaidya, A.
Structural Characterization of Composite Structural Insulated Panels for Exterior Wall Applications, 223

Vaidya, U.
see Vaidya, A., 223

Valach, Jaroslav, Ph.D.
see Válek, Jan, Ph.D., 1543

Valdovinos, Schaun
Roadway Reinvention, 2197

Válek, Jan, Ph.D.
Nondestructive Investigation of Wet Building Material: Multimethodical Approach, 1543

Valencia, Ralph
see Brant, Jonathan A., 674

Valentin, Vanessa
Evaluation of the Visibility of Workers' Safety Garments during Nighttime Highway-Maintenance Operations, 1850

Valenzuela, Sergio, M.Sc.
Proposal of an Integrated Index for Prioritization of Bridge Maintenance, 126

Valeo, Caterina
see He, Jianxun, 745

Valeriano, Oliver Cristian Saavedra
Optimal Dam Operation during Flood Season Using a Distributed Hydrological Model and a Heuristic Algorithm, 1114

Valerio, Giulia
see Pilotti, Marco, 1014

Vallée, Till
see Tannert, Thomas, Ph.D., 494

Valyrakis, M.
see Diplas, P., 1284

van Andel, Schalk Jan
Modeling Controlled Water Systems, 1244

van Beerschoten, Wouter A.
see Newcombe, Michael P., 1750

Van Brunt, Michael, P.E.
see Bahor, Brian, Q.E.P., 697

van de Lindt, J. W.
see Stone, A., 2153

van de Lindt, John W.
Experimental Seismic Response of a Full-Scale Six-Story Light-Frame Wood Building, 1732
Rapid Girder Selection and Cost Estimation for Simple-Made-Continuous Steel Bridge Design, 2158
Three-Dimensional Seismic Response of a Full-Scale Light-Frame Wood Building: Numerical Study, 1611
see Dao, Thang N., 1676
see Filiatrault, Andre, 1631
see Pang, Weichiang, 1688

van de Ven, M. F. C.
see Molenaar, A. A. A., 1429

van de Ven, Martin
see Liu, Gang, 1431

van der Linden, Thomas J. M.
see van Paassen, Leon A., 941

van der Star, Wouter R. L.
see van Paassen, Leon A., 941

van Dijk, J. C.
see Blokker, E. J. M., 1960

van Gelder, Boudewijn H. W.
see Han, Jen-Yu, 1768

van Kruiningen, Frans
see van Andel, Schalk Jan, 1244

van Leeuwen, J. (Hans), Ph.D., P.E.
see Li, Ling, Ph.D., 645

van Loosdrecht, Mark C. M.
see van Paassen, Leon A., 941

van Overloop, P. J.
Real-Time Implementation of Model Predictive Control on Maricopa-Stanfield Irrigation and Drainage District's WM Canal, 1281

van Paassen, Leon A.
Quantifying Biomediated Ground Improvement by Ureolysis: Large-Scale Biogrout Experiment, 941

van Reeuwijk, Maarten
see Lari, Kaveh Sookhak, 1005

van Rhee, C.
Sediment Entrainment at High Flow Velocity, 1001

van Susante, Paul J.
see Facas, Norman W., 546

Van, Thomas, P.E.
see Gedafa, Daba S., Ph.D., 1826

van Vuuren, Jan
see Raad, Darian, 2019

VanBriesen, Jeanne
see Xu, Jianhua, 1980

Vande Voort, Thomas
see Suleiman, Muhannad T., 910

Vanevenhoven, Linda M.
LRFD Factors for Pultruded Wide-Flange Columns, 1663

Vardaki, S., Ph.D.
see Yannis, G., 1838

Vardanega, P. J.
Ranking Binder Creep Performance Using the ARRB Elastometer, 1391

Vardy, Alan E.
Evaluation of Unsteady Wall Shear Stress by Zielke's Method, 990

Vasan, A.
Optimization of Water Distribution Network Design Using Differential Evolution, 1987

Vasconcelos, Graça
see Haach, Vladimir G., 1653

Vásquez, L. F. Gonzalo
Installation and Axial Pullout of Suction Caissons: Numerical Modeling, 886

Vassilopoulos, Anastasios P.
see Keller, Thomas, 224

Vatankhah, Ali R.
Exact Sensitivity Equation for One-Dimensional Steady-State Shallow Water Flow (Application to Model Calibration), 1150

Vazquez, J.
see Kesserwani, G., 1010

Vazquez, José
see Ghostine, Rabih, 992
see Ghostine, Rabih, 1024

Vecchiotti, Mauro
see di Prisco, Claudio, 922

Vedagiri, P.
see Arasan, V. Thamizh, 1922

Vega-Zamanillo, Angel, Ph.D.
see Rodriguez-Hernandez, Jorge, Ph.D., 773

Veiga, R.
see Silva, J., 1366

Velinsky, Steven A.
see Arsenault, Aaron, 1185

Velísková, Yvetta, Ph.D.
see Dulovičová, Renáta, M.Sc., 1247

Vempati, Rajan K.
see Ferraro, Rossella M., 1464

Venkatesh, G.
see Ugarelli, Rita, 1174

Vennapusa, Pavana K. R.
Geostatistical Analysis for Spatially Referenced Roller-Integrated Compaction Measurements, 853

Venot, Jean-Philippe
Farmers' Adaptation and Regional Land-Use Changes in Irrigation Systems under Fluctuating Water Supply, South India, 1267

Ventura, Stephen J.
see Moltz, Heidi L. N., 1088

Venturini, S.
see Paris, A., 1144

Verderame, Gerardo Mario
see Nardone, Fabio, Ph.D., 1752

Veressinina, Yelena
see Goi, Anna, Ph.D., 614

Verma, Ashish
Challenges in Transportation Planning for Asian Cities, 1916
see Kasturia, Saurabh, 1920

Vernerey, Franck J.
Nonlinear, Large Deformation Finite-Element Beam/Column Formulation for the Study of the Human Spine: Investigation of the Role of Muscle on Spine Stability, 591

Vickery, Peter J.
Ultimate Wind Load Design Gust Wind Speeds in the United States for Use in ASCE-7, 1668

Vieira da Rocha, Sérgio P.
see Alcoforado de Moraes, Márcia Maria Guedes, 2009

Vielhaber, Beate
see Melchior, Stefan, 705

Vieux, Baxter E.
see Fang, Zheng, 2020

Vijayaraghavan, K.
Removal of Metal Ions from Storm-Water Runoff by Low-Cost Sorbents: Batch and Column Studies, 734

Vikesland, Peter
see Parks, Jeffrey, 1398

Vilhunen, Sari
Evaluation of UV LEDs Performance in Photochemical Oxidation of Phenol in the Presence of H_2O_2, 640

Villarini, Gabriele
see Javier, Julie Rose N., 1058

Villeneuve, Jean-Pierre
see Poulin, Annie, 2025

Vinik, Paul, P.E.
see Liu, Pan, Ph.D., 1896

Vinod, Jayan
see Indraratna, Buddhima, 863

Vinod, Jayan S.
see Indraratna, Buddhima, 26

Vipulanandan, Cumaraswamy
see Nam, Moon S., 888

Virkutyte, Jurate, Ph.D.
see Vilhunen, Sari, 640

Viswanadham, B. V. S.
Experimental Study on Flexural Testing of Compacted Soil Beams, 1392

Viswanathan, Shekar
Evaluation of the Biocriteria of Streams in the San Diego Hydrologic Region, 684

Vítkovský, John P.
see Lee, Pedro J., 1029

Vives, Antonio
Selecting Infrastructure Delivery Modalities: No Time for Ideology or Semantics, 355

Vives, Salvador R.
see Nieto, Leopoldo M., 757

Viviani, Gaspare, P.E.
see Freni, Gabriele, 1986

Vivoni, Enrique R.
see Forzieri, Giovanni, 1032
see Liuzzo, Lorena, Ph.D., 1068

Vogel, Richard
see Oommen, Thomas, 931

Vogel, Richard M.
see Ray, Patrick A., 1962
see Zoltay, Viktoria I., 2016

Vogl, Adrian L.
Evaluating Watershed Experiments through Recursive Residual Analysis, 1239

Vogt, Marlon W., P.E., ed.
Electrical Transmission and Substation Structures 2009: Technology for the Next Generation, 2240

Vögtle, Thomas
see Centeno, Jorge Antonio Silva, 1781

Voigt, Thomas
Using Fly Ash, Clay, and Fibers for Simultaneous Improvement of Concrete Green Strength and Consolidatability for Slip-Form Pavement, 1361

Vojinovic, Zoran
see Barreto, Wilmer, 2014

Von Stockhausen, Shawna A., P.E.
see Hanson, James L., Ph.D., P.E., 882

Voo, Yen Lei
Shear Strength of Steel Fiber-Reinforced Ultrahigh-Performance Concrete Beams without Stirrups, 1743

Voordijk, Hans
see Adriaanse, Arjen, 414

Vořechovská, Dita
Probabilistic Assessment of Concrete Structure Durability under Reinforcement Corrosion Attack, 1553

Voruganti, Avinash
see Duthie, Jennifer, 1949

Voss, Kristofor A.
see Viswanathan, Shekar, 684

Voustianiouk, Andrei
see Gorokhovich, Yuri, 1560

Voyde, Emily
Quantifying Evapotranspiration Rates for New Zealand Green Roofs, 1095

Vreeburg, J. H. G.
see Blokker, E. J. M., 1960

Wachman, G. S.
Structural Behavior of a Pile-Supported Embankment, 777

Wade, Samuel A.
Effect of Temperature on the Setting Behavior of Concrete, 1363

Wadhera, Dhiraj
see Vickery, Peter J., 1668

Wadia-Fascetti, Sara
see LeBeau, Keary, P.E., 132

Wadzuk, Bridget M.
see Batroney, Thomas, 1069
see Jenkins, Jennifer K. Gilbert, 1292

Wagemaker, R. M. J.
see van Overloop, P. J., 1281

Waggerman, Raymond
see Bogus, Susan M., 1169

Wallace, John W.
see Lemnitzer, Anne, 936
see Skolnik, Derek A., 1760

Wallen, Christopher M.
see Xia, Meng, 725

Wallender, Wes
see Saha, R., 1227

Wallender, Wesley W.
see Singh, Purnendu N., 1232

Waller, S. Travis
see Boyles, Stephen D., 1163
see Duthie, Jennifer, 1949

Walls, Richard
Optimizing Structures Subject to Multiple Deflection Constraints and Load Cases Using the Principle of Virtual Work, 1748

Walter, M. Todd
see Shaw, Stephen B., 630

Walubita, Lubinda F.
see Hu, Xiaodi, 1843
see Wang, Rongxia, 1534
see Zhou, Fujie, 1827

Wan, Richard
Micromechanical Formulation of Stress Dilatancy as a Flow Rule in Plasticity of Granular Materials, 518

Wandzura, Colin
see Berthelot, Curtis, Ph.D., P.E., 1806

Wang, C. H.
Water Well Resonance Induced by Preearthquake Signals, 575

Wang, C. M.
see Pham, D. C., 1697
see Xiang, Y., 563
see Zhang, Y. Y., 516

Wang, C. Y.
Buckling of a Weakened Infinite Beam on an Elastic Foundation, 513

Wang, Chang-Jung
see Liu, Shu-Shun, 440

Wang, Chao
see Quddus, Mohammed A., 1833

Wang, Chen, Ph.D.
Development and Testing of a Fluorescent Fiber Solar Concentrator for Remote Daylighting, 455

Wang, Chen-Hua
see Lee, Hsien-Yi, 2097

Wang, Dan
see Lam, Ka-Chi, 286

Wang, Dong
Three-Dimensional Large Deformation Finite-Element Analysis of Plate Anchors in Uniform Clay, 808
see Zhou, Guoqing, 1825

Wang, Dunling
see Hu, Yafei, 1581

Wang, Feng
Toward Monte Carlo Simulation-Based Mechanistic-Empirical Prediction of Asphalt Pavement Performance, 1860

Wang, Futian, Ph.D.
see Liu, Rengkui, Ph.D., 1905

Wang, Guangyuan
see Tu, Yongqing, 1384

Wang, Hao
see Fan, Jiansheng, 1691
see Sang, Xuefeng, 1201

Wang, Haolei
see Shao, Xudong, 1716

Wang, Hongtao
Natural Organic Matter Removal by Adsorption onto Carbonaceous Nanoparticles and Coagulation, 729

Wang, Hsiao-Lun
see Bozorg-Haddad, Amir, Ph.D., 1488

Wang, I. T.
see Chung, W. H., 1159

Wang, J. H.
Wall and Ground Movements due to Deep Excavations in Shanghai Soft Soils, 871

Wang, J. J.
see Zuo, L. X., 44

Wang, Jialai, P.E.
see Qiao, Pizhong, P.E., 514

Wang, Jing
Using Flotation to Separate Oil Spill Contaminated Beach Sands, 625

Wang, Jinling, Ph.D.
see Hewitson, Steve, Ph.D., 1767

Wang, K., P.E.
see Kevern, J. T., 1393

Wang, Kejin
see Voigt, Thomas, 1361

Wang, Kelvin C. P.
Gray Clustering-Based Pavement Performance Evaluation, 1792

Wang, Linbing, ed.
see Meier, Roger, ed., 2280
see Tarefder, Rafiqul A., Ph.D.; P.E., ed., 2266
see Zhou, Guoqing, 1825

Wang, Linling, Ph.D.
see Yuan, Songhu, Ph.D., 719

Wang, Liping
see Zhang, Ga, Ph.D., 927

Wang, Lixu
see Fang, Hongwei, 953

Wang, Naiyu
Reliability-Based Evaluation of Flexural Members Strengthened with Externally Bonded Fiber-Reinforced Polymer Composites, 1721

Wang, Pai-Yi
see Chiang, Hsiao-Wei D., 448

Wang, Peng
see Robert, Mathieu, 212

Wang, Ping-Hsiung
see Ou, Yu-Chen, 1632

Wang, Q.
see Xiang, Y., 563

Wang, Qian, Ph.D., P.E.
see Zou, Xiao-Kang, Ph.D., 1734

Wang, Qin
see Liu, Pan, Ph.D., 1896

Wang, R. Y.
see Chung, W. H., 1159

Wang, Rongxia
Characterization of Rutting (Permanent Strain) Development of A-2-4 and A-4 Subgrade Soils under the HVS Loading, 1534

Wang, ShouQing
see Ke, Yongjian, 1198

Wang, Shutao
see Liu, Baicang, 669

Wang, Shu-Ying
see Wu, Chang-Yong, 749

Wang, Song-Gen
see Zhao, Hong-Ming, 1841

Wang, Tai-Sheng
see Chen, Li, 287

Wang, Tao
Application of Hansen Solubility Parameters to Predict Compatibility of SBS-Modified Bitumen, 1428

Wang, Tie-hang
Experimental Study on Moisture Migration in Unsaturated Loess under Effect of Temperature, 172

Wang, Tzu-Bin
see Yang, Chieh-Hou, 848

Wang, W. D.
see Wang, J. H., 871

Wang, Wei
see Yang, Min, Ph.D., 1874
see Yang, Min, Ph.D., 1874

Wang, Weiming
see Chen, Sheng-hong, 930

Wang, X.
see Gordaninejad, F., 1619
see Wu, S., 594

Wang, Xiang-Rong
see Yong, Yi, 1929

Wang, Xiangyu
see Ning, Ping, 770

Wang, Xiao
see Yu, Jianying, 1430

Wang, Xiao-Hui
Simplified Methodology for the Evaluation of the Residual Strength of Corroded Reinforced Concrete Beams, 1506

Wang, Xiujuan
see Gong, Yongwei, Ph.D., 1161

Wang, Xuehong
see Qiu, Yaqin, Ph.D., 1969

Wang, Yaming
see Ning, Ping, 770

Wang, Yaowu
Spatial Decision Support System for Urban Planning: Case Study of Harbin City in China, 1933

Wang, Yinhai, Ph.D., ed.
see Wei, Heng, Ph.D., P.E., ed., 2257

Wang, Yiquan
see Sun, Huiming, 756

Wang, Yi-Tin
see Dastidar, Aniruddha, 735

Wang, Yuan-feng
Experimental Investigation on Square High-Strength Concrete Short Columns Confined with AFRP Sheets, 210

Wang, Yue
Performance-Based Procedure for Direct Displacement Design of Engineered Wood-Frame Structures, 1704

Wang, Z.
see Chen, Y., 1747

Wang, Z. R.
see Li, Yan, Ph.D., 1944

Wang, Zengrong
Multivariate Statistical Approach to Structural Damage Detection, 460

Wang, Zhaohua
see Tsai, Yichang (James), 1814

Wang, Zhengzhong
see Liu, Jiliang, 1286

Wang, Zong-ping
Photocatalytic Degradation of Orange II in Aqueous Iron-Rich Montmorillonite Solutions, 626

Wanielista, Marty
see Chopra, Manoj, 1098

Wanitkorkul, Assawin
see Filiatrault, Andre, 1631

Waratuke, Andrew R.
see Cataño-Lopera, Yovanni A., 998

Ward , Thomas, P.E., S.E., ed.
Ports 2010: Building on the Past, Respecting the Future, 2270

Ward, Nicholas Dudley
Distribution of Stream Depletion, 959

Warn, Gordon P.
Sustained-Load and Fatigue Performance of a Hybrid FRP-Concrete Bridge Deck System, 260

Warne, Tom, P.E.
Special Report: The Infrastructure Roundtables: Concluding Thoughts—How Do We Spread the Message About the Need to Improve the Nation's Infrastructure? How Can Civil Engineers Best Engage the Public and Policy Makers?, 2186

Warpinski, Margaret K.
Influence of Flexibility on the Fatigue Performance of the Base Plate Connection in High-Mast Lighting Towers, 1639

Washer, Glenn
Effects of Solar Loading on Infrared Imaging of Subsurface Features in Concrete, 130

Waters, T. J.
see Vardanega, P. J., 1391

Watkins, David
see Pingel, Nathan, 1991

Watkins, David W.
see LeFevre, Nancy-Jeanne Bachmann, 1237
see Rucinski, Daniel K., 688

Watson, Hunna
see Love, Peter E. D., 342

Weaver, Paul M.
see Herencia, J. Enrique, 569

Weaver, Thomas J., Ph.D., P.E.
Reduction Factor for the Unloading Point Method at Clay Soil Sites, 837

Weber, Benedikt
Damage Identification in a Truss Tower by Regularized Model Updating, 1637

Weber, F.
Optimal Tuning of Amplitude Proportional Coulomb Friction Damper for Maximum Cable Damping, 1618

Weber, L.
see Zeng, J., 1000

Wehmeyer, Loren L.
Effect of Historic Land Cover Change on Runoff Curve Number Estimation in Iowa, 1124

Wei, Heng, Ph.D., P.E., ed.
ICCTP 2010: Integrated Transportation Systems–Green - Intelligent - Reliable, 2257

Wei, Hua, Ph.D.
see Zhang, Peng, Ph.D., 1489

Wei, Jianming
Influence of Commercial Wax on Performance of Asphalt, 1426

Wei, Pei-Rei
see Yang, Jyh-Bin, 84

Wei, Zaishan
Simultaneous Desulfurization and Denitrification by Microwave Catalytic over FeCoCu/Zeolite 5A Catalyst, 768

Wei, Zixin
see Wu, Jichun, 1079

Weible, Christopher M.
see Sadiq, Abdul-Akeem, 2089

Weickgenannt, Martin
Risk-Based Sensor Placement for Contaminant Detection in Water Distribution Systems, 2023

Weinstein, Neil, P.E., ed.
Green Streets and Highways 2010: An Interactive Conference On The State of the Art and How to Achieve Sustainable Outcomes, 2250

Weirich, Frank H.
see Wehmeyer, Loren L., 1124

Weiss, Jason
see Sant, Gaurav, 1371

Weiss, W. Jason
see Kwak, Hyo-Gyoung, 1450

Weitbrecht, Volker
see Detert, Martin, 1021

Weitz, Keith
see Bahor, Brian, Q.E.P., 697

Weldon, Brad D.
Experimental Evaluation of Posttensioned Precast Concrete Coupling Beams, 1713

Welker, Andrea L.
see Jenkins, Jennifer K. Gilbert, 1292

Wells, Julia
see Voyde, Emily, 1095

Wen, Fushuan
see Lin, Zhenzhi, 451

Wen, Long-Mao
see Kao, Jehng-Jung, 662

Weng, C. H.
see Tsai, T. T., 642

Weng, George J.
see Pan, Huang-Hsing, 566

Weng, Jiancheng, Ph.D., ed.
see Wei, Heng, Ph.D., P.E., ed., 2257

Werwigk, Michael
see Schober, Hans, 2194

West, Brian
see Morgenthal, Guido, 108

West, Geraint
see Simmons, Stephen M., 945

West, Randy C., Ph.D., P.E.
see Kim, Jaeseung, Ph.D., 509

Westdyk, Dimitra
Modeling Evapotranspiration Effects on Air Flowing in a Small Glass Roofed Tunnel, 1236

Westerman, Julie M.
see Reed, Dorothy A., 457
see Reed, Dorothy A., 2088

Westphal, Kirk S.
see Zoltay, Viktoria I., 2016

Wetherill, Matthew
see Boddy, Stefan, 301

Wever, Thomas E.
Effect of Fabric Webs on the Static Response of Spindle-Shaped Tensairity Columns, 1649

Wey, Ming-Yen
see Chou, Jing-Dong, 621

Wheeler, Andrew
see Ernst, Stefan, Ph.D., 1625

Whelan, Gary
see Canale, Raymond P., 2017

Whelan, Matthew J.
In-Service Diagnostics of a Highway Bridge from a Progressive Damage Case Study, 150

Whelton, Andrew J., Ph.D.
Contaminant Diffusion, Solubility, and Material Property Differences between HDPE and PEX Potable Water Pipes, 634

White, D. J.
see Hodder, M. S., 23

White, David J., Ph.D.
see Mekkawy, Mohamed M., Ph.D., 1511
see Randolph, Mark F., 866
see Vennapusa, Pavana K. R., 853

White, Donald W.
Unified Flexural Resistance Equations for Stability Design of Steel I-Section Members: Overview, 8

White, Edward D.
see Thal, Alfred E., 431

White, George C.
see Muench, Stephen T., P.E., 1914

White, H.
Integral Abutment Bridges: The European Way, 2150

White, Langford B.
see Zecchin, Aaron C., 1018

White, Luther
see Zaman, Musharraf, 12

White, Stacey Swearingen, Ph.D.
see Johnson, Bonnie J., Ph.D., AICP, 1950

Whited, Gary
see El Asmar, Mounir, 405

Whittaker, Andrew S.
see Ballantyne, Graeme J., 1621
see Kalpakidis, Ioannis V., 1657
see Marin-Artieda, Claudia C., P.E., 154

Whittington, Donald A., P.E.
see Gibson, G. Edward, P.E., 321

Whyte, Jennifer
see Harty, Chris, 361

Wichtmann, T.
Prediction of Permanent Deformations in Pavements Using a High-Cycle Accumulation Model, 845

Wierschem, Nicholas
see Andrawes, Bassem, 102

Wight, Gordon R.
see El-Hacha, Raafat, 184

Wight, R. Gordon
see Kim, Yail J., 165

Wijewickreme, Dharma
Postcyclic Reconsolidation Strains in Low-Plastic Fraser River Silt due to Dissipation of Excess Pore-Water Pressures, 905

Wilk, A., Ph.D.
see Koc, W., 1902

Wilkerson, Jared
Incorporating Surface Storage and Slope to Estimate Clark Unit Hydrographs for Ungauged Indiana Watersheds, 1148

Wilkinson, Alex
Improvement of Problematic Soils by Lime Slurry Pressure Injection: Case Study, 915

Wilkinson, Allen
see Zeng, Xiangwu, 51
see Zeng, Xiangwu, 63

Willems, Patrick
Parsimonious Model for Combined Sewer Overflow Pollution, 646

Williammee, Richard
see Saride, Sireesh, Ph.D., 1409

Williams, R. Chris
see Chen, Don, 1523

Williams, R. Christopher
see Li, Xinjun, 1355

Williamson, Eric B.
see Beltran, Juan Felipe, 552

Wilsnack, Mark
see Haitjema, Henk, 1110

Wilson, Dan
see Dashti, Shideh, 788
see Dashti, Shideh, 864

Wilson, Daniel W.
see Brandenberg, Scott J., 857

Wilson, James F., Ph.D., P.E.
Passive Restraint System for Floating Docks with Large Water-Level Excursions, 2159

Wilson, John T.
see Shen, Hai, 727

Wilson, Patrick
Large-Scale Passive Earth Pressure Load-Displacement Tests and Numerical Simulation, 932

Wilson, Tammie
see Schnabel, William E., 171

Wiltshire, Richard L., P.E.
Hoover Dam: 75th Anniversary History Symposium, 2256
see Goss, Christoph M, Ph.D., P.E., ed., 2249

Wimsatt, Andrew, Ph.D., P.E.
see Chen, Dar Hao, Ph.D., P.E., 793

Winans, Russell
see Arwade, Sanjay R., 499

Winkel, Michael
Structural Behavior of Wood Light-Frame Wall Segments Subjected to In-Plane and Out-of-Plane Forces, 1689

Winston, R. J.
see Hunt, W. F., 1105

Winters, Danny
see Suh, Kwangsuk, 215

Wirth, Jeannine, P.E., C.C.M.C.
Breaking into the Men's Room: Five Traits of Women Engineers with a Boardroom Seat, 2074

Wittel, F. K.
see Masoero, E., 556

Wong, C. Jerry, ed.
Guidelines for Electrical Transmission Line Structural Loading, 2253

Wong, C. K.
Comparison of Using Mixed-Integer Programming and Genetic Algorithms for Construction Site Facility Layout Planning, 425

Wong, C. W. Y.
see Tang, L. C. M., 270

Wong, Franky W. H.
see Lam, Patrick T. I., 295

Wong, G.
Drought Analysis Using Trivariate Copulas Conditional on Climatic States, 1070

Wong, James M. W.
Modeling Construction Occupational Demand: Case of Hong Kong, 413
see Chan, Daniel W. M., 364

Wong, Johnny K. W.
see Creedy, Garry D., 367

Wong, Kenny
Global Dimension of Robust Project Network Design, 358

Wong, Ngian Chung
see Wong, Nyuk Hien, 1953

Wong, Nyuk Hien
Perception Studies of Vertical Greenery Systems in Singapore, 1953

Wong, S. C.
Bidirectional Pedestrian Stream Model with Oblique Intersecting Angle, 1815

Wong, Wilson W.
see Hanson, James L., Ph.D., P.E., 882

Wong, Y. L.
see Yu, T., 1646

Wood, Ken
see Uang, Chia-Ming, 1701

Wood, Sharon L.
Experimental Investigation of Bending Fatigue Response of Grouted Stay Cables, 106

Woods, Mark
see Huang, Baoshan, 1468

Worel, Ben
see Li, Xinjun, 1355

Wormleaton, Peter R.
see Bhuiyan, Faruk, 1002

Worrall, Denis
see Love, Peter E. D., 1603

Woskie, Susan R., Ph.D.
see Shepherd, Susan, Sc.D., 437

Wöstmann, Jens
see Válek, Jan, Ph.D., 1543

Wotherspoon, Liam M.
Investigation on the Impact of Seasonally Frozen Soil on Seismic Response of Bridge Columns, 139

Wright, Deona Johnson
Effectiveness of Source-Zone Remediation of DNAPL-Contaminated Subsurface Systems, 663

Wright, N. G.
see Clifford, N. J., 1050

Wu, C. Y.
see Lin, C. E., 2111

Wu, Chang-Yong
Effect of Carbon Source on Biological Nitrogen and Phosphorus Removal in an Anaerobic-Anoxic-Oxic (A^2O) Process, 749

Wu, Chengqing
see Haskett, Matthew, 219

Wu, Chin H.
Efficient Nonhydrostatic Modeling of Surface Waves from Deep to Shallow Water, 2039
see Young, Chih-Chieh, Ph.D., 474

Wu, Gang
Mechanical Properties of Steel-FRP Composite Bar under Uniaxial and Cyclic Tensile Loads, 1462
see Gu, Dong-Sheng, 230

Wu, Han-liang
see Wang, Yuan-feng, 210

Wu, Hwai-Chung
Development of Fiber-Reinforced Cement-Based Composite Sheets for Structural Retrofit, 1405

Wu, J.
see Chen, S. R., P.E., 115

Wu, Jiaer, Ph.D., P.E.
see Feldsher, Theodore B., P.E., 2209

Wu, Jichun
Numerical Simulation of Viscoelastoplastic Land Subsidence due to Groundwater Overdrafting in Shanghai, China, 1079

Wu, Langhui
see Ma, Baosong, 1572

Wu, Peng
Project Management and Green Buildings: Lessons from the Rating Systems, 1588

Wu, Qingbai
Thermal Interaction between Permafrost and the Qinghai-Tibet Railway, 175

Wu, Rongzong
see Choi, Jae Woong, 1790

Wu, S.
Mesh Dependence and Nonlocal Regularization of One-Dimensional Strain Softening Plasticity, 594

Wu, Shaopeng
Laboratory Study on Ultraviolet Radiation Aging of Bitumen, 1427
see Liu, Gang, 1431

Wu, Wenyan
Accounting for Greenhouse Gas Emissions in Multiobjective Genetic Algorithm Optimization of Water Distribution Systems, 1974
Single-Objective versus Multiobjective Optimization of Water Distribution Systems Accounting for Greenhouse Gas Emissions by Carbon Pricing, 2015

Wu, Wie, ed.
see Tonon, Fulvio, ed., 2232

Wu, Xiang-Guo
Interface Shear Connection Analysis of Ultrahigh-Performance Fiber-Reinforced Concrete Composite Girders, 141

Wu, Xiaohui, Ph.D.
see Yuan, Songhu, Ph.D., 719

Wu, Y. L.
Effect of Diffuser Design on Thermal Comfort and Ventilation Efficiency, 2121

Wu, Yong
see Li, Xinpo, 860

Wu, Yu-Fei
Unified Strength Model Based on Hoek-Brown Failure Criterion for Circular and Square Concrete Columns Confined by FRP, 193
see Gu, Dong-Sheng, 230

Wu, Yuhong
Object Recognition in Construction-Site Images Using 3D CAD-Based Filtering, 267

Wu, Zheng Yi
Pressure-Dependent Leak Detection Model and Its Application to a District Water System, 1970

Wu, Zhimin
Analytical Solution for Fracture Analysis of CFRP Sheet–Strengthened Cracked Concrete Beams, 580

Wu, Zhi-Min
see Zhao, Hong-Ming, 1841

Wu, Zhishen
see Li, Li, 196

see Li, Suzhen, 1620

Wu, Zhi-Shen
see Gu, Dong-Sheng, 230
see Wu, Gang, 1462

Wu, Zhong
see Tao, Mingjiang, 1813

Wutke, Juliana Dias
see Centeno, Jorge Antonio Silva, 1781

Wyatt, Scott T.
see Mehrabi, Armin B., 128

Xenidis, H.
see Kiousis, Panos D., 558

Xi, Yunping
see Apipattanavis, Somkiat, 429

Xia, Meng
Influence of Physical Forcing on Bottom-Water Dissolved Oxygen within Caloosahatchee River Estuary, Florida, 725

Xiang, Y.
Dynamic Instability of Nanorods/Nanotubes Subjected to an End Follower Force, 563

Xiao, Feipeng, Ph.D., P.E.
Influence of Antistripping Additives on Moisture Susceptibility of Warm Mix Asphalt Mixtures, 1461
see Koduru, Hari Krishan, 1805

Xiao, Junhua
see Liu, Jiankun, 855

Xiao, L. J.
see Cheng, Y. M., 899

Xiao, Q. G.
Behavior and Modeling of Confined High-Strength Concrete, 201

Xiao, X. H.
see Chang, C. C., 540

Xiao, Y.
see Choi, K. K., 1664

Xiao, Yan
Design and Construction of Modern Bamboo Bridges, 145
see Choi, Kang-Kyu, 188

Xiao, Yang
see Deng, An, 34

Xiaoqing, Zhang, Ph.D.
Analytical Approach for Detection of Multiple Cracks in a Beam, 493

Xie, Hongjie
see Sharif, Hatim O., 1120

Xie, Hua
see Lian, Yanqing, 1119

Xie, Jiancang
see Luo, Jungang, 1140

Xie, Wei
see Al-Qadi, Imad L., P.E., 1830

Xie, Yan
see Chen, Yunmin, 843

Xie, Yuanchang, Ph.D.
Kernel-Based Machine Learning Models for Predicting Daily Truck Volume at Seaport Terminals, 1911

Xie, Zhirong
see Wei, Zaishan, 768

Xin, Ming
Robust Control of PVTOL Aircraft with a Nonlinear Optimal Control Solution, 67

Xinghua, Fan
see Yunquan, Liu, 1432

Xiong, Yi
see Zhang, Yu, 277

Xiumin, Fan
see Jian, Cheng, Ph.D., 55

Xu, G. H.
see Li, Yan, Ph.D., 1944

Xu, Guochang
see Yeh, Ta-Kang, 1771

Xu, Hongfeng, Ph.D.
Comparative Analysis of Unconditional and Conditional Priority for Use at Isolated Signalized Intersections, 1906

Xu, Hongpo
see Bagchi, Ashutosh, 1510

Xu, Jian
see Zou, Guilian, 1433

Xu, Jianhua
Integrating Location Models with Bayesian Analysis to Inform Decision Making, 1980

Xu, L.
see Parnell, R., 1671

Xu, Ling, ed.
see Zhang, Jin, ed., 2258

Xu, Ning-Shou
see Ma, Tian-Wei, 524

Xu, Peng
see Liu, Rengkui, Ph.D., 1905

Xu, Qiyong, Ph.D., P.E.
Tire-Derived Steel for Hydrogen Sulfide Removal in Landfill Cover, 2118

Xu, Renting
see Cirillo, Cinzia, 1938
see Yang, Min, Ph.D., 1874

Xu, Rui
Case Study of Distributed Hydrologic Model for Soil and Nutrient Loss Estimation in Small Watershed, 2102

Xu, Shi-Lang
Experimental Study and Theoretical Models on Compressive Properties of Ultrahigh Toughness Cementitious Composites, 1463

Xu, Wenjie, Ph.D.
see Liu, Ning, Ph.D., 1037

Xu, Xian
Force Finding of Tensegrity Systems Using Simulated Annealing Algorithm, 1709

Xu, Xun
see Zhou, Guangchun, 296

Xu, Y.
see Yoon, J., 60

Xu, Yan
see Guan, Zhongguo, 153

Xu, Yelin
Developing a Fuzzy Risk Allocation Model for PPP Projects in China, 404

Xu, Z. H.
see Wang, J. H., 871

Xu, Z. Z.
see Chen, R. P., 850

Xu, Zhou
Decomposition and Effects of Pulse Components in Near-Field Ground Motions, 1675

Xue, Xiaolong
Critical Review of Collaborative Working in Construction Projects: Business Environment and Human Behaviors, 1335

Xue, Yadong
see Li, Zhihong, 933

Xue, Yuqun
see Wu, Jichun, 1079

Yadav, Sushil
see Goyal, Radha, 2123

Yalcin, Cem
see Parvin, Azadeh, 183

Yalcintas, Melek, Ph.D.
see Rima, Jamil, Ph.D., 680

Yam, Michael C. H.
see Lam, Angus C. C., 254

Yamamoto, Kazuo
see Modin, Oskar, 632

Yamini, Hamid
Probability of Failure Analysis due to Internal Corrosion in Cast-Iron Pipes, 1170

Yan, Anna, Ph.D.
Mediation for Public Construction Contracts under the GPA in Taiwan, 1305

Yan, Banfu
see Shao, Xudong, 104

Yan, Li Chun
Travel Demand Model for Beijing 2008 Olympic Games, 1845

Yan, S.
see Bhunia, Puspendu, 2112

Yan, Song
Emerging Contaminants of Environmental Concern: Source, Transport, Fate, and Treatment, 2096
see Subramanian, S. Bala, 694

Yanful, Ernest K., Ph.D.
see Song, Qing, 691
see Yeheyis, Muluken B., 690

Yang, Byongsoo
see Moon, Sungwoo, 272

Yang, Chieh-Hou
Application of BGPR Logging: Two Case Studies, 848

Yang, Chou-Ping
Water Quality Modeling of a Hypoxic Stream, 2107

Yang, Dawen
see Valeriano, Oliver Cristian Saavedra, 1114

Yang, F., Ph.D.
Stability of Shallow Tunnel Using Rigid Blocks and Finite-Element Upper Bound Solutions, 38

Yang, Guishan
see Su, Weizhong, 1957

Yang, Henry T. Y.
see Ma, Tian-Wei, 524
see Sebastijanovic, Nebojsa, 578

Yang, J. S.
see Yang, F., Ph.D., 38

Yang, Jay
see Ahuja, Vanita, 368

Yang, Jing
Critical Success Factors for Stakeholder Management: Construction Practitioners' Perspectives, 391

Yang, Jyh-Bin
Causes of Delay in the Planning and Design Phases for Construction Projects, 84

Yang, Kai-Lin
see Qiao, Qing-Song, 1243

Yang, Ke, ed.
see Liang, Robert Y., ed., 2233

Yang, Keun-Hyeok
Effects of Water-Binder Ratio and Fine Aggregate–Total Aggregate Ratio on the Properties of Hwangtoh-Based Alkali-Activated Concrete, 1443

Yang, Ku Seung, Ph.D., P.E.
see Seo, Min-Woo, Ph.D., 838

Yang, Kun
see Valeriano, Oliver Cristian Saavedra, 1114

Yang, Lei
Experimental Study on the Impact of Rainfall on RCC Construction, 362

Yang, Min, Ph.D.
Modeling Destination Choice Behavior Incorporating Spatial Factors, Individual Sociodemographics, and Travel Mode, 1874

Yang, Ming, Ph.D.
Undrained Capacity of Plate Anchors under General Loading, 908

Yang, Q. R.
Tensile Stiffness and Deformation Model of Rubber Isolators in Tension and Tension-Shear States, 501

Yang, Shih-Hsien
see Al-Qadi, Imad L., Dist., 1454

Yang, Shu-Qing
Depth-Averaged Shear Stress and Velocity in Open-Channel Flows, 1043

Yang, Shutong
see Wu, Zhimin, 580

Yang, Songtao
see Ling, Hoe I., 523

Yang, Sun Sheng
see Yan, Li Chun, 1845

Yang, Xiaoguang
see Ma, Wanjing, 1901

Yang, Xinhua
see Ye, Yong, 503

Yang, Ya-Ching
see Chen, Po-Han, 297

Yang, Zhongzhen
Modeling Road Traffic Demand of Container Consolidation in a Chinese Port Terminal, 1883
see Yu, Bin, 1849

Yannis, G.
Older Drivers' Perception and Acceptance of In-Vehicle Devices for Traffic Safety and Traffic Efficiency, 1838

Yannis, George
see Papadimitriou, Eleonora, 1887

Yanxiang, Jiang, Ph.D.
see Lixin, Yi, 2081

Yao, Jinbao
see Yu, Bin, 1849

Yao, Liya
see Sun, Lishan, 1951

Yao, Yifu
see Ergas, Sarina J., P.E., 733

Yao, Zhanyong, Ph.D.
see Chen, Dar-Hao, Ph.D., P.E., 1535

Yardımcı, Mert Y.
see Yazıcı, Halit, 1466

Yasuda, Hiroyasu
One-Dimensional Study on Propagation of Tsunami Wave in River Channels, 950

Yazdani, Nur, Ph.D.
Deficiency Analysis of Coastal Buildings toward Storm Damage Reduction, 1508

Yazdani, Ramin
see Barlaz, Morton A., 707

Yazıcı, Halit
Improvement on SIFCON Performance by Fiber Orientation and High-Volume Mineral Admixtures, 1466

Ye, Cun-En
see Chang, Ray C., 61

Ye, D. Q.
see Huang, H. B., 747

Ye, Dan
New Performance-Based Approach to Ensure Quality Curing during Construction, 1418

Ye, L. P.
see Godat, A., 202

Ye, Shujun
see Wu, Jichun, 1079

Ye, X. W.
see Ni, Y. Q., 1759

Ye, Yong
Modified Schapery's Model for Asphalt Sand, 503

Yeh, Harry
Gender and Age Factors in Tsunami Casualties, 2080

Yeh, Ta-Kang
Clarifying the Relationship between Quality of Global Positioning System Data and Precision of Positioning, 1771

Yeh, William W.-G.
see Chiu, Yung-Chia, 1989

Yeheyis, Muluken B.
Feasibility of Using Coal Fly Ash for Mine Waste Containment, 690

Yeoh, K. W.
see Chua, David K. H., 378

Yesiller, Nazli, Ph.D.
see Hanson, James L., Ph.D., P.E., 169

Yeşiller, Nazlı, Ph.D.
see Hanson, James L., Ph.D., P.E., 704

Yesiller, Nazli, Ph.D.
see Hanson, James L., Ph.D., P.E., 882

Yeung, John F. Y.
see Xu, Yelin, 404

Yi, Chang-Yong
see Lee, Dong-Eun, 313

Yi, Ping, ed.
see Zhang, Jin, ed., 2258

Yidana, Sandow Mark
Groundwater Classification Using Multivariate Statistical Methods: Birimian Basin, Ghana, 765

Yiğiter, Hüseyin
see Yazıcı, Halit, 1466

Yildirim, Yetkin, Ph.D., P.E.
Case for Expanding the Claim Dispute Resolution Training of TxDOT Personnel, 1314

Yilmaz, Sevgi
see Toy, Süleyman, 1955

Yin, Jian-Hua
see Hossain, Md. Akhtar, 791

Yin, Jun
see Wang, Jing, 625

Yin, Samuel Y. L.
see Tserng, H. Ping, 334

Yin, Xianqiang
see Sun, Huiming, 756

Yin, Zhen-Yu
see Chang, Ching S., 535
see Chang, Ching S., 539

Yindeesuk, Sukit
see Park, Jung-Woong, 1627

Ying, G.
see Liu, B., 759
see Sansalone, J., 760

Ying, Gaoxiang
see Ma, Jia, 744
see Sansalone, John, 628

Yi-qiu, Tan
Interactions of Granite and Asphalt Based on the Rheological Characteristics, 1435
Research on High- and Low-Temperature Properties of Asphalt-Mineral Filler Mastic, 1434
see Al-Hadidy, A. I., 1406

Yitayew, Muluneh, Ph.D.
see Stewart, Dave, 1074

Yiu, Tak Wing
see Cheung, Sai On, 365

Yokota, Hiroshi
see Dai, Jian-Guo, 258

Yonaba, H.
Comparing Sigmoid Transfer Functions for Neural Network Multistep Ahead Streamflow Forecasting, 1085

Yong, Yi
Urban Land-Use Zoning Based on Ecological Evaluation for Large Conurbations in Less Developed Regions: Case Study in Foshan, China, 1929

Yongjiu, Shi
see Lili, Wu, 490

Yoo, Chungsik
Performance of Geosynthetic-Encased Stone Columns in Embankment Construction: Numerical Investigation, 887

Yoon, D. K.
see Kim, Yail J., 146

Yoon, Hyung-Koo
see Lee, Jong-Sub, 792

Yoon, J.
Alternating Direction Implicit Method-Based Nonlinear Filtering for Relative Orbit Estimation, 60

Yoon, Myung-Gon
Relative Circular Navigation Guidance for Three-Dimensional Impact Angle Control Problem, 71

York, C. B.
Unified Approach to the Characterization of Coupled Composite Laminates: Benchmark Configurations and Special Cases, 64

Yoshitake, Isamu
Moving-Wheel Fatigue for Bridge Decks Strengthened with CFRP Strips Subject to Negative Bending, 253

Yossef, Mohamed F. M.
Sediment Exchange between a River and Its Groyne Fields: Mobile-Bed Experiment, 1004

You, Jinshing
Quality Control of Soil Water Data in Applied Climate Information System—Case Study in Nebraska, 1076

You, Wei Yang
see Zhao, Zhen Yu, Ph.D., 419

You, Zhanping, Ph.D., P.E.
see Liu, Yu, 1415
see Tarefder, Rafiqul A., Ph.D.; P.E., ed., 2266

Youn, Heejung, Ph.D.
Numerical Study of the Effect of Verification Core Hole on the Point Bearing Capacity of Drilled Shafts, 900

Young, Alan G., ed.
see Templeton, J. S., Dr. of Eng., P.E., ed., 2265

Young, Bradley S., P.E.
see Baker, William F., P.E., 2170

Young, Chih-Chieh, Ph.D.
Nonhydrostatic Modeling of Nonlinear Deep-Water Wave Groups, 474
see Wu, Chin H., 2039

Young, Walker R.
Celebrating Hoover Dam: Mission of Boulder Dam Fulfilled, 2218
Celebrating Hoover Dam: Significance of Boulder Canyon Project, 2217

Young, William
see Archer, Jeffery, 1856

Yousefi, Saied
Attitude-Based Negotiation Methodology for the Management of Construction Disputes, 1328
Considering Attitudes in Strategic Negotiation over Brownfield Disputes, 1315

Youwai, Sompote
see Jongpradist, Pornkasem, 1345

Yu, Ann T. W.
Pedagogy of Teaching Value Management in Postgraduate Construction and Property Program, 1591

Yu, Bin
Genetic Algorithm for Bus Frequency Optimization, 1849

Yu, Chaoming, Ph.D.
Development and Validation of 3D Composite Structural Elements at Elevated Temperatures, 1634

Yu, Cheng
Distortional Buckling of Cold-Formed Steel Shear Wall Studs under Uplift Force, 1638

Yu, Congrong
see Sun, Huiming, 756

Yu, Jianying
Effect of Various Organomodified Montmorillonites on the Properties of Montmorillonite/Bitumen Nanocomposites, 1430

Yu, Lei, Ph.D., P.E.
see Chen, Xumei, 1885

Yu, Qiang
Problems with Hu-Duan Boundary Effect Model and Its Comparison to Size-Shape Effect Law for Quasi-Brittle Fracture, 463

Yu, T.
Stress-Strain Behavior of Concrete in Hybrid FRP-Concrete-Steel Double-Skin Tubular Columns, 1646
see Xiao, Q. G., 201

Yu, Wen-der
Integrating Neurofuzzy System with Conceptual Cost Estimation to Discover Cost-Related Knowledge from Residential Construction Projects, 265

Yu, Xiong (Bill), ed.
see Huang, Maosong, ed., 2281

Yu, Yi-Lin
see Tong, Zhao-Xia, 920

Yuan, Deren, Ph.D.
see Madhyannapu, Raja Sekhar, Ph.D., 785

Yuan, J. P.
see Chiu, Abraham C. F., 897

Yuan, Jingfeng, Ph.D.
Performance Objectives Selection Model in Public-Private Partnership Projects Based on the Perspective of Stakeholders, 1326

Yuan, Linjuan
see Zhang, Xin, 984

Yuan, Peng
Equivalent Barge and Flotilla Impact Forces on Bridge Piers, 144

Yuan, Songhu, Ph.D.
Development of a Novel Internal Electrolysis System by Iron Connected with Carbon: Treatment of Nitroaromatic Compounds and Case of Engineering Application, 719

Yuan, Xin
see Ergas, Sarina J., P.E., 733

Yuan, Yong
see Tao, Jin, 1455

Yuan, Zhiguo
see Zhang, Lishan, 742

Yuanqing, Wang
see Lili, Wu, 490

Yuen, Ka-Veng
Efficient Model Correction Method with Modal Measurement, 468

Yuen, Ka-Wing
see Leung, Mei-yung, 423

Yumikura, Keiyu
see Yoshitake, Isamu, 253

Yun, Taeyoung
Time-Temperature Superposition for HMA with Growing Damage and Permanent Strain in Confined Tension and Compression, 1387

Yun, Tianquan
see Su, Cheng, 119

Yung, Nelson H. C.
see Wong, S. C., 1815

Yunquan, Liu
Development and Evaluation of the Hard-Grade Asphalt, 1432

Yura, Joseph
Global Lateral Buckling of I-Shaped Girder Systems, 6

Yusheng, Shi
see Qingsong, Wei, 1228

Yves-Henri, Faure, Ph.D.
see Cyril, Guidoux, Ph.D., 846

Zachman, Bradley A.
Modeling TOC Breakthrough in Granular Activated Carbon Adsorbers, 631

Zaharinie, Tuan
see Huda, Zainul, 53

Zahraei, Ali
see Afshar, Abbas, 1964

Zakaria, Fadhadli
see Hussin, Mohd Warid, 1372

Zakaria, N. A.
see Julien, P. Y., 969

Zakaria, Nor Azazi
see Azamathulla, H. Md., 958

Zalewski, Bart F.
Worst-Case Pointwise Discretization Error Bounds for Systems with Geometrically Induced Singular Flux Solutions Using Interval Boundary Element Method, 529

Zaman, Arif M.
see Tarefder, Rafiqul A., 22
see Tarefder, Rafiqul A., 1421

Zaman, Musharraf
Neural Network Modeling of Resilient Modulus Using Routine Subgrade Soil Properties, 12

Zanenga, Erminio
Feasibility Study of Rotorcraft Fire Fighting for High-Rise Buildings, 58

Zang, Jun
see Ma, Yuxiang, 467

Zanuttigh, Barbara
see Di Cristo, Cristiana, 943

Zanzi, L.
see Binda, L., 1544

Zapata, Raúl E.
see Nadal, Norberto C., 1992

Zapata-Medina, David G.
Static Stability Formulas of a Weakened Timoshenko Column: Effects of Shear Deformations, 608

Zareian, Farzin
Structural System Parameter Selection Based on Collapse Potential of Buildings in Earthquakes, 1699

Žarnić, Roko, Ph.D.
see Bosiljkov, Vlatko, Ph.D., 1665

Zarrati, Amir Reza
see Mashahir, Mohammad B., 962

Zayed, Tarek
see Fares, Hussam, 1567
see Khan, Zafar, 1512

Zecchin, Aaron C.
Frequency-Domain Modeling of Transients in Pipe Networks with Compound Nodes Using a Laplace-Domain Admittance Matrix, 1018

Zech, Y.
see Petaccia, G., 970

Zechman, Emily
see Nicklow, John, 2001

Zechman, Emily M.
see Reichold, Laurel, 1996

Zeghal, M.
see El Shamy, U., P.E., 32

Zeghloul, A.
see Daouadji, A., 517

Zein, Ahmed S., P.E.
Frequency Spectrum Analysis of Impact-Echo Waveforms for T-Beams, 161

Zeitler, Jon
see Sharif, Hatim O., 1120

Zekioglu, Atila, P.E.
Seismic Sophistication, 2191

Zekkos, Dimitrios, Ph.D., P.E., ed.
Geotechnical Characterization Field Measurement, and Laboratory Testing of Municipal Solid Waste, 2248
Physical Characterization of Municipal Solid Waste for Geotechnical Purposes, 895
see Bray, Jonathan D., 10

Zeman, Frank
Considering Carbon Capture and Storage for Energy Generation from Municipal Solid Waste, 698

Zeng, Guihua
see Wei, Zaishan, 768

Zeng, J.
3D Calculations of Equilibrium Conditions in Loose-Bed Open Channels with Significant Suspended Sediment Load, 1000

Zeng, Qing-Fu
see Fu, Jie, 758

Zeng, Xiangwu
Geotechnical Properties of JSC-1A Lunar Soil Simulant, 51
Geotechnical Properties of NT-LHT-2M Lunar Highland Simulant, 63

Zerihun, D.
see Bautista, E., 1276

Zhai, Zhengli
see Sang, Xuefeng, 1201

Zhan, Liangtong
see Chen, Yunmin, 843

Zhang, Bing-Jian
see Zhao, Yi, 767

Zhang, Dian-Ji
see Chai, Hua-You, 892

Zhang, Feng, ed.
see Liang, Robert Y., ed., 2233

Zhang, Ga, Ph.D.
Stability Analysis of Strain-Softening Slope Reinforced with Stabilizing Piles, 927
see Tong, Zhao-Xia, 920

Zhang, Guanghua, M.S.
Impact of Bead Density on Paint Pavement Marking Retroreflectivity, 1871

Zhang, Guimin
Peer-to-Peer-Based Publish/Subscribe Architecture for Advanced Infrastructure Systems, 268

Zhang, H. L.
see Song, Z. W., 1226

Zhang, Han, Ph.D.
Dynamic Life-Cycle Modeling of Pavement Overlay Systems: Capturing the Impacts of Users, Construction, and Roadway Deterioration, 1194
Life-Cycle Optimization of Pavement Overlay Systems, 1195

Zhang, Hao
see Yong, Yi, 1929

Zhang, Hong Bo
see Lee, Kwang-Sub, Ph.D., 1875

Zhang, Hongbing
What Is the Role of Multiple Secondary Incidents in Traffic Operations?, 1895

Zhang, Hongyan
see Lu, Ronghu, 641
see Xia, Meng, 725

Zhang, Huawen
see Smith, Scott T., 234

Zhang, J.
Efficient Probabilistic Back-Analysis of Slope Stability Model Parameters, 783

Zhang, Jian-Min
Effects of Strain Localization on Seismic Active Earth Pressures, 873
see Tong, Zhao-Xia, 920

Zhang, Jiansheng
see Chen, Cheng, 37

Zhang, Jianxin, Ph.D.
see Liu, Ning, Ph.D., 1037

Zhang, Jin, ed.
ICLEM 2010: Logistics For Sustained Economic Development — Infrastructure, Information, Integration, 2258

Zhang, Jing
Approach Using Active Groundwater Storage for Hydrologic Model Calibration in West-Central Florida, 1205
Modeling Evapotranspiration of Two Land Covers Using Integrated Hydrologic Model, 1256
see Liu, Baicang, 669

Zhang, L.
Simple General Solution for Interfacial Stresses in Plated Beams, 220

Zhang, L. M.
Microporosity Structure of Coarse Granular Soils, 912
Uncertainties in Geologic Profiles versus Variability in Pile Founding Depth, 917
see Zhang, J., 783

Zhang, Lei
see Li, Baoshun, 282

Zhang, Lianyang
Method for Estimating the Deformability of Heavily Jointed Rock Masses, 896
Nonlinear Analysis of Torsionally Loaded Piles in a Two-Layer Soil Profile, 18

Zhang, Lishan
Ferrous Salt Demand for Sulfide Control in Rising Main Sewers: Tests on a Laboratory-Scale Sewer System, 742

Zhang, Mingyi
Three-Dimensional Nonlinear Analysis for the Cooling Characteristics of Crushed-Rock Interlayer Embankment with Ventilated Duct along the Qinghai-Tibet Expressway in Permafrost Regions, 176

Zhang, Ning
Adsorptive Removal of Parts per Million Level Selenate Using Iron-Coated GAC Adsorbents, 731

Zhang, Peng, Ph.D.
Investigation of Flexural Properties of Cement-Stabilized Macadam Reinforced with Polypropylene Fiber, 1489
see Wong, S. C., 1815

Zhang, Rui
see Zhu, Yimin, 292

Zhang, T. C.
see Bhunia, Puspendu, 2112

Zhang, Tian C., ed.
see Khanal, Samir K., ed., 2228
see Yan, Song, 2096

Zhang, Wentao
Using Recycled Concrete Aggregates in New Zealand Ready-Mix Concrete Production, 1390

Zhang, X. D., Ph.D.
see Lin, Q. G., Ph.D., P.Eng., 1939

Zhang, Xiaoning
see Zou, Guilian, 1433

Zhang, Xiaoqiang, ed.
see Zhang, Jin, ed., 2258

Zhang, Xiao-Yan
see Yi-qiu, Tan, 1434

Zhang, Xin
Hydraulic Relations for Clinging Flow of Sharp-Crested Weir, 984

Zhang, Xiong
Determining the Shapes of Yield Curves for Unsaturated Soils by Modified State Surface Approach, 796
see Hoyos, Laureano R., ed., 2243

Zhang, Y. Y.
Bending, Buckling, and Vibration of Micro/Nanobeams by Hybrid Nonlocal Beam Model, 516

Zhang, Yang
Moments-Based Reduced Spectral Wave Modeling of Frequency-and-Directional Spreading Effects on Wave-Induced Longshore Currents, 2047

Zhang, Yi Mei
Integrated Fuzzy Ranking Analysis for Assessing the Quality of Composting Products, 670

Zhang, Yongchuan
see Li, Yinghai, 1981

Zhang, Yu
Techniques for Predicting Cracking Pattern of Masonry Wallet Using Artificial Neural Networks and Cellular Automata, 277

Zhang, Yun
see Wu, Jichun, 1079

Zhang, Yuzhen
see Wang, Tao, 1428
see Wei, Jianming, 1426

Zhang, Z. T.
Investigation of Turbulence Effects on Torsional Divergence of Long-Span Bridges by Using Dynamic Finite-Element Method, 155

Zhang, Zhanmin
see Boyles, Stephen D., 1163
see Pantelias, Aristeidis, 1188

Zhang, Zhenxing
New Approach to Identify Trend Pattern of Streamflows, 1081

Zhang, Zhi-cai
see Shi, Peng, 1093

Zhang, Zhi-Ming
see Fu, Jie, 758

Zhang, Zhongjie
see Tao, Mingjiang, 1813

Zhao, Hong-Ming
Concrete Slab Installed with Carbon Fiber Heating Wire for Bridge Deck Deicing, 1841

Zhao, Hua
see Shao, Xudong, 1716

Zhao, J. M.
see Li, C. Q., 2038

Zhao, Jincheng, Ph.D.
see Qiu, Yaqin, Ph.D., 1969

Zhao, Mi
see Du, Xiu-Li, 464

Zhao, Qiuhong, P.E.
see Hastings, John S., P.E., 167

Zhao, Tuo
see O'Connell, Robert M., P.E., 1571

Zhao, Wenbin
see Xiao, Feipeng, Ph.D., P.E., 1461

Zhao, X.
see Chiu, Abraham C. F., 897

Zhao, Yan-Gang
see Lu, Zhao-Hui, 1476

Zhao, Yi
Removal of Trichlorobenzene from Flue Gas Using Complex Absorbent, 767

Zhao, Z. H.
see Cheng, Y. M., 883

Zhao, Zhen Yu, Ph.D.
Application of Innovative Critical Chain Method for Project Planning and Control under Resource Constraints and Uncertainty, 419
Prediction System for Change Management in Construction Project, 380

Zheng, Gang, Ph.D.
see Wang, Rongxia, 1534

Zheng, Hui-feng
see Chen, Sheng-hong, 930

Zheng, Jianjun
Simple Three-Step Analytical Scheme for Prediction of Elastic Moduli of Hardened Cement Paste, 1478
see Wu, Zhimin, 580

Zheng, Jianzhong
see Wang, Jing, 625

Zheng, Jun-jie
see Chen, Bao-guo, Ph.D., 1517

Zheng, Lei, Ph.D.
see Yuan, Jingfeng, Ph.D., 1326

Zheng, Mingming
see Xu, Hongfeng, Ph.D., 1906

Zheng, Sha
First Public-Private-Partnership Application in Taiwan's Wastewater Treatment Sector: Case Study of the Nanzih BOT Wastewater Treatment Project, 406

Zhong, Jinquan
Stiffness Degradation and Time to Cracking of Cover Concrete in Reinforced Concrete Structures Subject to Corrosion, 480

Zhong, Ming
Exploring Best-Fit Hazard Functions and Lifetime Regression Models for Urban Weekend Activities: Case Study, 1817

Zhou, Chong
see Yura, Joseph, 6

Zhou, Fujie
Development, Calibration, and Verification of a New Mechanistic-Empirical Reflective Cracking Model for HMA Overlay Thickness Design and Analysis, 1827
see Hu, Xiaodi, 1843
see Wang, Rongxia, 1534

Zhou, G. C.
see Zhang, Yu, 277

Zhou, Guangchun
Innovative ANN Technique for Predicting Failure/Cracking Load of Masonry Wall Panel under Lateral Load, 296

Zhou, Guoqing
Integration of GIS and Data Mining Technology to Enhance the Pavement Management Decision Making, 1825

Zhou, Hao
see Lin, Zhenzhi, 451

Zhou, Hongqiang
Extended Fourth-Order Depth-Integrated Model for Water Waves and Currents Generated by Submarine Landslides, 510

Zhou, Jianzhong
see Li, Yinghai, 1981

Zhou, Qiang
Stochastic Response of an Inclined Shallow Cable with Linear Viscous Dampers under Stochastic Excitation, 599

Zhou, Quan
see Xiao, Yan, 145

Zhou, Shi-Jun
Finite Beam Element Considering Shear-Lag Effect in Box Girder, 570

Zhou, Xingye
see Yi-qiu, Tan, 1435

Zhou, Xinzhu
see Zheng, Jianjun, 1478

Zhou, Y. Edward, P.E.
Investigation of Large Web Fractures of Welded Steel Plate Girder Bridge, 129

Zhou, Yan-Guo
Verification of the Soil-Type Specific Correlation between Liquefaction Resistance and Shear-Wave Velocity of Sand by Dynamic Centrifuge Test, 789

Zhou, Ying-Wu
see Wu, Yu-Fei, 193

Zhou, Zuhao
see Qiu, Yaqin, Ph.D., 1969
see Sang, Xuefeng, 1201

Zhu, B.
see Chen, R. P., 850

Zhu, David Z.
see Cai, Jianan, 577
see Hall, Neil, 1017
see Shammaa, Yaser, 967

Zhu, Fan
see Leshchinsky, Dov, 801
see Leshchinsky, Dov, 934

Zhu, Hai-Liang
see Fu, Jie, 758

Zhu, Hongxia
Large Deformation Finite-Element Analysis of Submarine Landslide Interaction with Embedded Pipelines, 27

Zhu, Jesse
see Chowdhury, Nabin, Ph.D., 713

Zhu, Jiqing
see Wu, Shaopeng, 1427

Zhu, Lin
see Chen, Xumei, 1885

Zhu, Peng
Selection of Durable Closure Pour Materials for Accelerated Bridge Construction, 160

Zhu, Yimin
Applying Concept Similarity to the Evaluation of Common Understanding in Multidisciplinary Learning, 292

Zhu, Zhenhua
Concrete Column Recognition in Images and Videos, 305

Machine Vision-Based Concrete Surface Quality Assessment, 335

Zhuge, Y.
FRP-Retrofitted URM Walls under In-Plane Shear: Review and Assessment of Available Models, 249

Zidan, A.
see Lagos, L., 2119

Zigic, S.
see Benfer, N. P., 2037

Zillante, George, Ph.D.
see Zhao, Zhen Yu, Ph.D., 380

Zimmer, Andrea
see Fang, Zheng, 2020

Zisis, Ioannis
Wind-Induced Pressures on Patio Covers, 1723

Živanović, Stana
Modeling Spatially Unrestricted Pedestrian Traffic on Footbridges, 1735

Zofka, Adam
see Khazanovich, Lev, 541

Zollinger, Dan, Ph.D., P.E.
see Ghanem, Hassan, Ph.D., 1441

Zollinger, Dan G.
see Ye, Dan, 1418

Zoltay, Viktoria I.
Integrated Watershed Management Modeling: Generic Optimization Model Applied to the Ipswich River Basin, 2016

Zoorob, S. E.
see Forth, J. P., 1362

Zorita, A. L.
Determination and Optimization of the Maintenance Frequencies in the Overhead Contact Line System, 1893

Zornberg, Jorge G.
Centrifuge Permeameter for Unsaturated Soils. I: Theoretical Basis and Experimental Developments, 878
see McCartney, John S., 879

Zou, Guilian
Morphology of Asphalt Mixture Rheological Master Curves, 1433

Zou, Patrick X. W.
Understanding and Improving Your Risk Management Capability: Assessment Model for Construction Organizations, 400

Zou, Rui, Ph.D.
REILP Approach for Uncertainty-Based Decision Making in Civil Engineering, 294

Zou, Xiao-Kang, Ph.D.
Integrated Reliability-Based Seismic Drift Design Optimization of Base-Isolated Concrete Buildings, 1734

Zou, Yajie
see Gharaibeh, Nasir G., 1870

Zou, Zhichong
see Wang, Yaowu, 1933

Zugaj, M.
Autopilot Supported by Nonlinear Model Following Reconfigurable Flight Control System, 75

Zuo, Jian, Ph.D.
see Zhao, Zhen Yu, Ph.D., 380
see Zhao, Zhen Yu, Ph.D., 419

Zuo, L. X.
Planform and Flexibility on Lift Characteristics for Flow over Low-Aspect Ratio Wings, 44

Zureick, Abdul-Hamid
see Wang, Naiyu, 1721